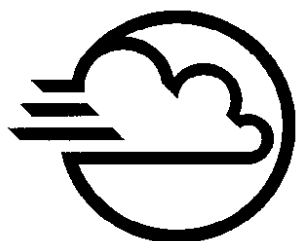


***Ambient  
Air  
Monitoring  
Network  
Plan***

**2014**



***Ventura County Air Pollution Control District  
Monitoring Division***

MALLORY HAM, MANAGER  
669 COUNTY SQUARE DRIVE • VENTURA, CA 93003 • 805-645-1400



## Table of Contents

1	Introduction.....	1
2	Overview of Network Operation .....	2
2.1	Ambient Air Monitoring Network in Ventura County .....	2
2.2	Monitoring Objectives and Spatial Scales.....	7
2.2.1	Ozone Monitoring Network .....	10
2.2.2	PM <sub>2.5</sub> and PM <sub>10</sub> Monitoring Network .....	11
2.2.3	Photochemical Assessment Monitoring Stations .....	14
2.2.4	California Air Resources Board Toxic Air Contaminant Sampling .....	15
2.3	Air Quality Data .....	15
3	Recent and Pending Modifications to the Air Monitoring Network.....	17
3.1	Network Operations - July 2013 to June 2014 .....	17
3.1.1	Network Operations with No Recent Changes .....	17
3.1.2	Recent Changes to the PM <sub>2.5</sub> and PM <sub>10</sub> Monitoring Networks .....	17
3.1.3	Recent Changes to the Speciation Trends Network, Chemical Speciation Network .....	18
3.1.4	Recent Changes to the PAMS Network.....	19
3.1.5	Recent Changes to the Meteorological Monitoring Network.....	20
3.1.6	Recent Changes to the Data Acquisition and Management System.....	20
3.1.7	Recent Changes to Laboratory Filter Processing Operations.....	20
3.1.8	Replacement of Analyzers and Equipment Since Last Reporting Period .....	21
3.2	Network Operations – Post May 2014 .....	23
3.2.1	Network Operations with No Proposed Changes.....	23
3.2.2	Future Changes - New NO <sub>2</sub> Near-Road Monitoring Station .....	23
3.2.3	Future Changes to the PAMS Network.....	24
3.2.4	Future Replacement of Analyzers and Equipment.....	24
Appendix A	2014 Annual Air Monitoring Network Plan Checklist .....	A-1
Appendix B	Detailed Site Information .....	B-1
Appendix C	Minimum Monitoring Requirements.....	C-1
Appendix D	Ambient Air Quality Standards.....	D-1
Appendix E	Collocation Requirements.....	E-1
Appendix F	Air Monitoring Network Related Correspondence .....	F-1

## List of Figures

Figure 1 – VCAPCD Monitoring Regions and Ambient Monitoring Stations.....	5
Figure 2 – Ventura County 8-hr Ozone Design Values .....	11
Figure 3 – Ventura County 8-hr Ozone Days Exceeding Standard .....	11
Figure 4 – Ventura County PM <sub>2.5</sub> Annual Average Design Values .....	12
Figure 5 – Ventura County PM <sub>2.5</sub> 24-hr Average Design Values .....	13
Figure 6 – Ventura County PM <sub>10</sub> Highest 24-hr Average Values.....	14

## List of Tables

Table 1 – Air Monitoring Stations and Pollutants Monitored in 2014 .....	4
Table 2 – Site Types and Appropriate Spatial Scales .....	8
Table 3 – Pollutants, Monitoring Objectives and Spatial Scales.....	9
Table 4 – Local Air Monitoring Regions - Area and Population Served.....	10
Table 5 – Summary of VOC Sampling Requirements Specified in the PAMS CAPM for Ventura County <sup>1</sup> .....	15
Table 6 – Sources of Ambient Air Quality Data .....	16
Table 7 – Analyzer and Equipment Replacement – July 2013 to June 2014 .....	22
Table 8 – Analyzer and Equipment Replacement – Post May 2014 .....	25
Table 9 – Location of Submitted Information – 2014 Ambient Air Monitoring Network Plan.....	A-1
Table 10 – El Rio Station Information.....	B-1
Table 11 – Ojai Station Information.....	B-5
Table 12 – Piru Station Information.....	B-7
Table 13 – Simi Valley Station Information.....	B-9
Table 14 – Thousand Oaks Station Information .....	B-13
Table 15 – Simi Valley – Upper Air Station Information.....	B-15
Table 16 – Minimum Monitoring Requirements for Ozone .....	C-1
Table 17 – Minimum Monitoring Requirements for PM <sub>2.5</sub> SLAMS .....	C-2
Table 18 – Minimum Monitoring Requirements for Continuous PM <sub>2.5</sub> Monitors .....	C-2
Table 19 – Minimum Monitoring Requirements for PM <sub>10</sub> .....	C-3
Table 20 – Minimum Monitoring Requirements for PM <sub>10-2.5</sub> .....	C-3
Table 21 – Minimum Monitoring Requirements for NO <sub>2</sub> .....	C-4
Table 22 – Minimum Monitoring Requirements for SO <sub>2</sub> .....	C-5
Table 23 – Minimum Monitoring Requirements for CO .....	C-5
Table 24 – Minimum Monitoring Requirements for Pb at NCore .....	C-6
Table 25 – Source Oriented Lead Monitoring (Including Airports).....	C-6
Table 26 – Ambient Air Quality Standards .....	D-1
Table 27 – VCAPCD Air Monitoring Network Correspondence.....	F-1

## Glossary of Acronyms

AAC	Atmospheric Analysis and Consulting, Inc.
AQI	Air Quality Index
AQS	Air Quality System
ARM	Approved Regional Method
BAM	Beta Attenuation Monitor
CARB	California Air Resources Board
CAPIII	California Alternative Plan III
CAAA	Clean Air Act Amendments
CBSA	Core Based Statistical Area
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CSN	Chemical Speciation Network
DAS	Data Acquisition System
DMS	Data Management System
EPA	United States Environmental Protection Agency
FEM	Federal Equivalent Method
FRM	Federal Reference Method
GPS	Global Positioning System
NAAQS	National Ambient Air Quality Standards
NCore	National Core Air Monitoring Sites
MSA	Metropolitan Statistical Area
NEI	National Emissions Inventory
NO	Nitric Oxide
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
NO <sub>y</sub>	Reactive Nitrogen Compounds
O <sub>3</sub>	Ozone
PAMS	Photochemical Assessment Monitoring Stations
ppm	parts per million
Pb	Lead
PM	Particulate Matter
PM <sub>2.5</sub>	Particulates less than or equal to 2.5 microns in size
PM <sub>10</sub>	Particulates less than or equal to 10 microns in size
POC	Parameter Occurrence Code
PQAO	Primary Quality Assurance Organization
QA	Quality Assurance
QC	Quality Control
SASS	Spiral Ambient Speciation Sampler

## Glossary of Acronyms (cont'd)

SIP	State Implementation Plan
SLAMS	State and Local Air Monitoring Stations
SO <sub>2</sub>	Sulfur Dioxide
STN	Speciation Trends Network
TAD	Technical Assistance Document
µg/m <sup>3</sup>	micrograms per cubic meter
URG	University Research Glassware Corporation
VCAPCD	Ventura County Air Pollution Control District
VOC	Volatile Organic Compounds

# 1 Introduction

The Ventura County Air Pollution Control District's (VCAPCD) *2014 Ambient Air Monitoring Network Plan* is an examination and evaluation of the VCAPCD's network of ambient air pollution monitoring stations. This annual review of the VCAPCD's State and Local Air Monitoring Stations (SLAMS) air monitoring network is required by Title 40, Code of Federal Regulations, Part 58.10 (40 CFR 58.10). The report meets the requirements for an annual network plan as listed in 40 CFR 58.10, Appendix A.

As required by the regulations, this report includes monitors which are federal reference methods (FRM) or federal equivalent methods (FEM). While the CFR also requires reporting of approved regional methods (ARM), no ARMs are in operation within VCAPCD at this time. The terms FRM, FEM, and ARM denote monitoring instruments that produce measurements of the ambient pollution levels that the regulations allow to be compared to the National Ambient Air Quality Standards (NAAQS) for regulatory purposes.

Federal regulations require specific detailed monitoring network information be included in the annual network plans. A summary of the requirements, and how the VCAPCD has met each of the requirements, can be found in Appendix A. Additionally, for ease of identifying sections of the document that have changed substantively from last year's plan, VCAPCD staff has highlighted changed sections in yellow. The *2014 Ambient Air Quality Monitoring Network Plan* includes a review of actions taken since preparation of the last plan (July 2013), and plans for action in the year ahead.

This report will be available for a 30 day public inspection period. Any comments received during the public inspection period will be forwarded to the United States Environmental Protection Agency (EPA) concurrently with submittal of the plan. This report may be viewed on the VCAPCD's website, [www.vcapcd.org](http://www.vcapcd.org) and hardcopies are available for review at VCAPCD's office. Written comments should be submitted to Mallory Ham, Monitoring Division Manager, at [mallory@vcapcd.org](mailto:mallory@vcapcd.org), 805-662-6960.

## 2 Overview of Network Operation

The VCAPCD operates five air monitoring stations and one atmospheric profiler within Ventura County. The VCAPCD's SLAMS monitoring network has been designed to provide ozone (O<sub>3</sub>), fine particulate matter of a size of 2.5 microns or less (PM<sub>2.5</sub>) and particulate matter of a size of 10 microns or less (PM<sub>10</sub>) monitoring coverage to the majority of the inhabited regions of Ventura County. The VCAPCD has conducted air monitoring for ozone or oxidants in the county since 1963. This monitoring network plays a critical role in assessing clean air progress and in determining pollutant exposures throughout Ventura County.

### 2.1 Ambient Air Monitoring Network in Ventura County

Ventura County is located along the southern portion of the central California coast between Santa Barbara and Los Angeles Counties. Its diverse topography is characterized by mountain ranges to the north, two major river valleys (the Santa Clara, which trends east-west, and the Ventura, which trends roughly north-south), and the Oxnard Plain to the south and west. As pollutants are carried into the inland valleys by prevailing winds, they are frequently trapped against the mountain slopes by a temperature inversion layer, generally occurring between 1500 and 2500 feet above sea level. Above the temperature inversion layer, pollutants are allowed to disperse freely. Our air monitoring stations are therefore found between the coast and the inland valley mountain foothills up to approximately 1000 feet.

The purposes of the VCAPCD's air monitoring network are: 1) to determine Ventura County's attainment status for the National and California standards for ozone, PM<sub>2.5</sub> and PM<sub>10</sub>; 2) to track Ventura County's air quality trends; 3) to provide information to the public about the quality of Ventura County's air (i.e., reporting of the Air Quality Index (AQI) and ozone and particulate episode forecasting); and, 4) for data in air quality modeling efforts.

The California Air Resources Board (CARB) is the governmental agency delegated the authority and responsibility for collecting ambient air quality data as directed by the Clean Air Act. EPA designated CARB as one of four Primary Quality Assurance Organizations (PQAO) responsible for air monitoring in California. A PQAO is a monitoring organization or a coordinated aggregation of such organizations that is responsible for a set of air monitoring stations that monitor the same pollutants and for which data precision and accuracy assessments can logically be pooled. CARB's PQAO consists of CARB and 32 local air monitoring organizations throughout California, including VCAPCD. The VCAPCD operates the ambient air monitoring network in Ventura County.

CARB is required by federal regulations to provide quality assurance oversight to local air



monitoring organizations within CARB's PQAQ to ensure that consistent procedures are followed to produce data of similar quality. Measurement precision and accuracy among all air monitoring stations in a PQAQ is expected to be reasonably homogeneous. To address this issue and to ensure compliance with State and Federal air monitoring requirements, CARB collaborates with each monitoring organization in its PQAQ to define respective Roles and Responsibilities with regard to the operation of the State's ambient air monitoring network. CARB and VCAPCD are currently developing and revising Roles and Responsibilities; we anticipate that the document will be finalized within the next few months.

Ambient concentration data are collected for a wide variety of pollutants. The most important of these in Ventura County are ozone, PM<sub>2.5</sub>, and PM<sub>10</sub>. Other pollutants measured include oxides of nitrogen (NO<sub>x</sub>), nitric oxide (NO), nitrogen dioxide (NO<sub>2</sub>), toxics (hexavalent chromium, total metals and aldehydes), and volatile organic compounds (VOC). Measurement of meteorological parameters is also conducted at all monitoring stations. Data for all of the pollutants is used to better understand the nature of the ambient air quality in Ventura County, as well as to inform the public about the quality of the air.

Table 1 lists the pollutants measured in 2014 at each monitoring station, and the assigned Air Quality System (AQS) identification number for each monitoring station.

Not all pollutants are monitored at all stations. Most stations monitor for multiple pollutants, while some stations monitor only two pollutants. A particular station's location and monitoring purpose determine the actual pollutants measured at that station.

The majority of the population<sup>1</sup> resides in the southern half of Ventura County - the VCAPCD has focused its air monitoring efforts there. The south half of Ventura County is divided into five air monitoring regions: Ventura and the Oxnard Coastal Plain, Ojai Valley, Santa Clara River Valley, Simi Valley, and the Conejo Valley. The air monitoring network has been designed to provide air monitoring coverage to those regions of Ventura County.

Figure 1 shows Ventura County's air monitoring regions and the locations of the monitoring stations.

<sup>1</sup> All population estimates in this document are based on the 2010 U.S. Census.

Table 1 – Air Monitoring Stations and Pollutants Monitored in 2014

Parameter	Parameter Code	El Rio – Rio Mesa School #2 06-111-3001	Simi Valley – Cochran Street 06-111-2002	Ojai – Ojai Avenue 06-111-1004	Piru – Pacific Avenue 06-111-0009	Thousand Oaks – Moorpark Road 06-111-0007	Simi Valley Upper Air 06-111-0008
Ozone	44201	●	●	✓	✓	✓	
NO	42601	◆	◆				
NO <sub>2</sub> (area-wide)	42602	◆	◆				
NO <sub>x</sub>	42603	◆	◆				
PM <sub>2.5</sub> FEM – Continuous (local conditions)	88101	✓	✓*	✓	✓	✓	
PM <sub>10</sub> FEM – Continuous	81102	✓	✓				
PM <sub>10</sub> FEM – Continuous (local conditions)	85101	✓	✓				
VOC	misc	◆	◆				
Toxics	misc	**	**				
Atmospheric Profiler	NA						◆
Wind Speed – Scalar	61101	●	●	✓	✓	✓	●
Wind Direction – Scalar	61102	●	●	✓	✓	✓	●
Wind Speed – Resultant	61103	●	●	✓	✓	✓	●
Wind Direction – Resultant	61104	●	●	✓	✓	✓	●
Wind Gust	61105	●	●	✓	✓	✓	●
Sigma Theta	61106	●	●	✓	✓	✓	●
Temperature – Outside	62101	●	●	✓	✓	✓	●
Temperature – Max	62104	●	●	✓	✓	✓	●
Temperature – Min	62105	●	●	✓	✓	✓	●
Temperature – Indoor	62107	●	●	✓	✓	✓	●
Relative Humidity	62201	●	●	✓	✓	✓	●
Visibility	63101		✓				
Solar Radiation	63301	●	●	✓	✓	✓	●
UV Radiation	63302						●
Barometric Pressure	64101						●
Precipitation	65102	✓	✓	✓	✓	✓	✓

\* Primary and Collocated Samplers

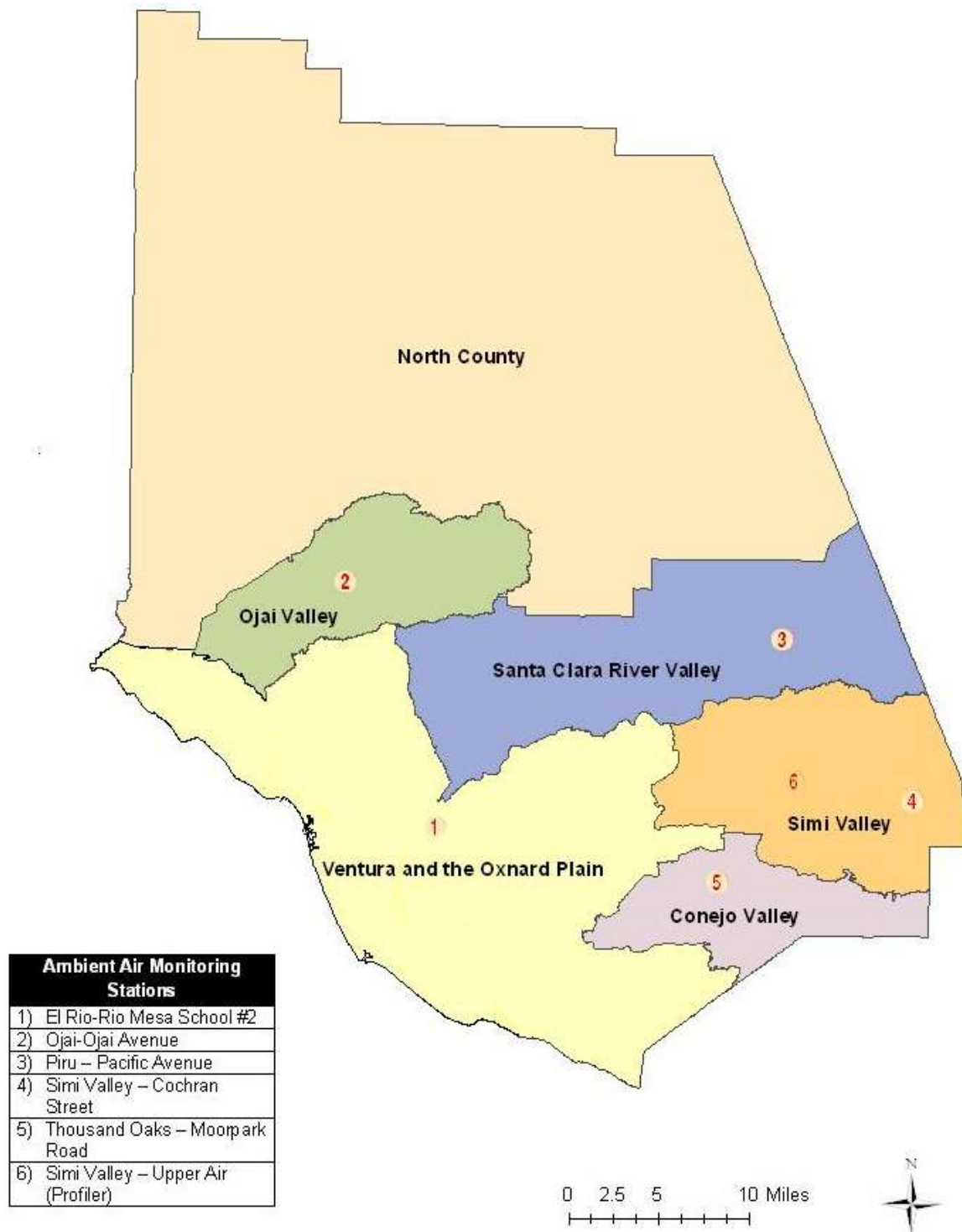
\*\* California Air Resources Board

✓ Monitored as part of SLAMS network.

◆ Monitored as part of Photochemical Assessment Monitoring Stations (PAMS) network.

● Monitored as part of SLAMS and PAMS networks.

Figure 1 – VCAPCD Monitoring Regions and Ambient Monitoring Stations



A description of each of the five monitoring regions is presented below.

Ventura and the Oxnard Coastal Plain – a broad coastal area stretching from the Pacific Ocean to several inland valleys, covering 405 square miles, and having a population of 433,245 people. This area encompasses the cities of Port Hueneme, Ventura, Oxnard and Camarillo. The Oxnard plain area is a relatively flat plain area with foothills and mountains at its northern border. This area is home to considerable agricultural activities and includes a deepwater port and a number of Ventura County’s major stationary sources<sup>2</sup>, including two natural gas-fired electric generating units, two naval bases, several natural gas-fired cogeneration facilities, several oil and gas production and processing facilities, and a paper products manufacturer. The area is impacted by mobile sources and marine shipping operations occurring off Ventura County’s coast. This area is served by the VCAPCD’s monitoring station at Rio Mesa High School, Central Avenue, in Oxnard.

Ojai Valley – an inland area including the City of Ojai and the communities of Oak View, and Meiners Oaks, covering 102 square miles, and having a population of 27,784 people. The Ojai Valley is surrounded by mountain ranges. There is one major stationary source on the southeastern edge of the region; however, the Ojai Valley may be influenced by oil production activities occurring to the south, in the Ventura Coastal area. The area is impacted primarily by mobile sources. The Ojai Valley is served by the VCAPCD’s monitoring station at Ventura County fire station #21, Ojai Avenue, in Ojai.

Santa Clara River Valley – an inland area, covering 204 square miles, and having a population of 45,107 people. The Valley is surrounded by foothills and low-lying mountains. The eastern edge of the Santa Clara River Valley is the border between Ventura and Los Angeles Counties. The area is also home to considerable agricultural activities. There are oil production and processing activities occurring throughout the Santa Clara River Valley. There are two major stationary sources in its boundaries. The area is impacted primarily by mobile sources. This area is served by the VCAPCD’s monitoring station on Pacific Avenue, one mile west of Piru.

Simi Valley – an inland area, including the cities of Simi Valley and Moorpark, covering 142 square miles, and having a population of 162,683 people. Simi Valley is surrounded by foothills and low-lying mountains. The eastern edge of the Simi Valley is the border between Ventura and Los Angeles Counties. There are two major stationary sources in its boundaries. The area is impacted primarily by mobile sources. This area is served by the VCAPCD’s monitoring station at Simi Valley High School, on Cochran Street, in Simi Valley.

<sup>2</sup> For the purpose of this report a major stationary source is considered to be a facility that has been issued a federal Part 70 operating permit (also referred to as a Title V permit).

Conejo Valley – an inland area, including the city of Thousand Oaks and the communities of Westlake Village and Newbury Park, covering 75 square miles, and having a population of 153,680 people. The area is surrounded by foothills and low-lying mountains. The eastern edge of the Conejo Valley is the border between Ventura and Los Angeles Counties. There are no major stationary sources in its boundaries. The area is impacted primarily by mobile sources. This area is served by the VCAPCD's monitoring station at Thousand Oaks High School, on Moorpark Road, in Thousand Oaks.

## 2.2 Monitoring Objectives and Spatial Scales

Federal regulations (40 CFR 58, Appendix D), require that a SLAMS network be designed to meet three monitoring objectives:

1. To provide air pollution data to the public in a timely manner;
2. To support compliance with the NAAQS; and,
3. To support air quality research.

In support of the monitoring objectives above, the monitoring network must be designed with a variety of site types. Sites can be designed:

1. To determine the highest concentration expected to occur in the area covered by the network;
2. To determine typical concentrations in areas of high population density;
3. To determine the impact on ambient pollution levels of significant sources or source categories;
4. To determine general background concentration levels;
5. To determine the extent of regional pollutant transport among populated areas, and in support of secondary standards; and,
6. To determine the welfare-related impacts in more rural and remote areas (such as visibility impairment and effects on vegetation).

The physical siting of an air monitoring station must achieve a spatial scale of representativeness that is consistent with the site type of the monitor. The spatial scale results from the physical location of the station with respect to the pollutant sources. It estimates the size of the area surrounding the monitoring station that experiences uniform pollutant concentrations.

The categories of spatial scale are:

1. Microscale – An area of uniform pollutant concentrations ranging from several meters up to 100 meters.

2. Middle Scale – Uniform pollutant concentrations in an area of about 100 meters to 0.5 kilometer.
3. Neighborhood Scale – An area with dimensions in the 0.5 to 4.0 kilometer range.
4. Urban Scale - Citywide pollutant conditions with dimensions ranging from 4 to 50 kilometers.
5. Regional Scale – A large area, usually rural, of the same general geography and without large sources that extends from tens to hundreds of kilometers.

Table 2 shows the relationship between site types and the spatial scales that are generally appropriate to those site types.

Table 2 – Site Types and Appropriate Spatial Scales

Site Type	Appropriate Spatial Scale
Highest Concentration	Micro, Middle, Neighborhood
Population Oriented	Neighborhood, Urban
Source Impact	Micro, Middle, Neighborhood
General/Background & regional transport	Urban, Regional
Welfare-related	Urban, Regional

Table 3 shows each of the VCAPCD's air monitoring stations and its criteria pollutant objective and spatial scales. Appendix B presents detailed site information about each of the monitoring stations in Ventura County.

Table 3 – Pollutants, Monitoring Objectives and Spatial Scales

Pollutant	Monitoring Station	Monitoring Objectives and Spatial Scale			
		NAAQS Comparison	Public Information	Research	Spatial Scale
Ozone	El Rio	✓			Urban
	Ojai	✓			Urban
	Piru	✓			Urban
	Simi Valley	✓			Urban
	Thousand Oaks	✓			Urban
NO <sub>2</sub>	El Rio	✓			Urban
	Simi Valley	✓			Urban
PM <sub>2.5</sub>	El Rio	✓			Neighborhood
	Ojai	✓			Neighborhood
	Piru	✓			Neighborhood
	Simi Valley	✓			Neighborhood
	Thousand Oaks	✓			Neighborhood
PM <sub>10</sub>	El Rio	✓			Neighborhood
	Simi Valley	✓			Neighborhood
VOCs	El Rio			✓	Neighborhood
	Simi Valley			✓	Urban
Toxics	El Rio			✓	NA
	Simi Valley			✓	NA

Table 4 contains the local regions in Ventura County and the population served by each of its air monitoring stations.

Appendix C of this document describes the minimum monitoring requirements for air monitoring networks in Ventura County. These requirements are specified in 40 CFR 58.10, Appendix D. Appendix C also presents documentation for pollutants for which no monitoring is required in Ventura County.

Appendix D presents the NAAQS as of 2014. Designations and attainment status are typically based on what are called design values. The design value for ozone is the 4<sup>th</sup> highest annual 8-hour maximum average in ppm. This means that Ventura County will have met the NAAQS for ozone when the design value for ozone is less than or equal to 0.075 parts per million (ppm).

Appendix E presents documentation of monitor collocation requirements as specified in 40 CFR 58 Appendix A, Section 3. Appendix E also presents documentation for pollutants for

which there are no collocation requirements in Ventura County.

Table 4 – Local Air Monitoring Regions - Area and Population Served

Station Name and Region Served	AQS ID	Area Served (Sq. Mi.)	Population Served	Population Density (Pop./Sq. Mi)
El Rio – Rio Mesa School #2 Region: Ventura and the Oxnard Coastal Plain	06-111-3001	405	433,245	1070
Ojai – Ojai Avenue Region: Ojai Valley	06-111-1004	102	27,784	272
Piru – Pacific Avenue Region: Santa Clara River Valley	06-111-0009	204	45,107	221
Simi Valley – Cochran Street Region: Simi Valley	06-111-2002	142	162,683	1146
Thousand Oaks – Moorpark Road Region: Conejo Valley	06-111-0007	75	153,680	2049

## 2.2.1 Ozone Monitoring Network

Ventura County is designated a serious nonattainment area for the federal 8-hour ozone standard. The VCAPCD monitors ozone hourly at all of its air monitoring stations (El Rio, Ojai, Piru, Simi Valley, and Thousand Oaks), except the Simi Valley Upper Air station. The NAAQS for ozone is set at the level of 0.075 ppm, averaged over 8 hours.

The level of the NAAQS has been exceeded at various monitoring stations in Ventura County. Countywide ozone design values and days exceeding the standard have continued to decline despite increasing population and vehicle miles travelled in Ventura County. The ozone NAAQS is exceeded most frequently at Simi Valley, followed by Ojai and Piru. The El Rio monitoring station infrequently exceeds the ozone NAAQS. The maximum eight-hour ozone concentration for 2013 was at 0.089 ppm, recorded at the Simi Valley monitoring station. For 2014 (through the end of May), the maximum concentration has been 0.085 ppm, also recorded at the Simi Valley monitoring station. Figure 2 presents 8-hr ozone design values through 2013, and Figure 3 presents days over the 8-hr ozone standard through 2013.



Figure 2 – Ventura County 8-hr Ozone Design Values

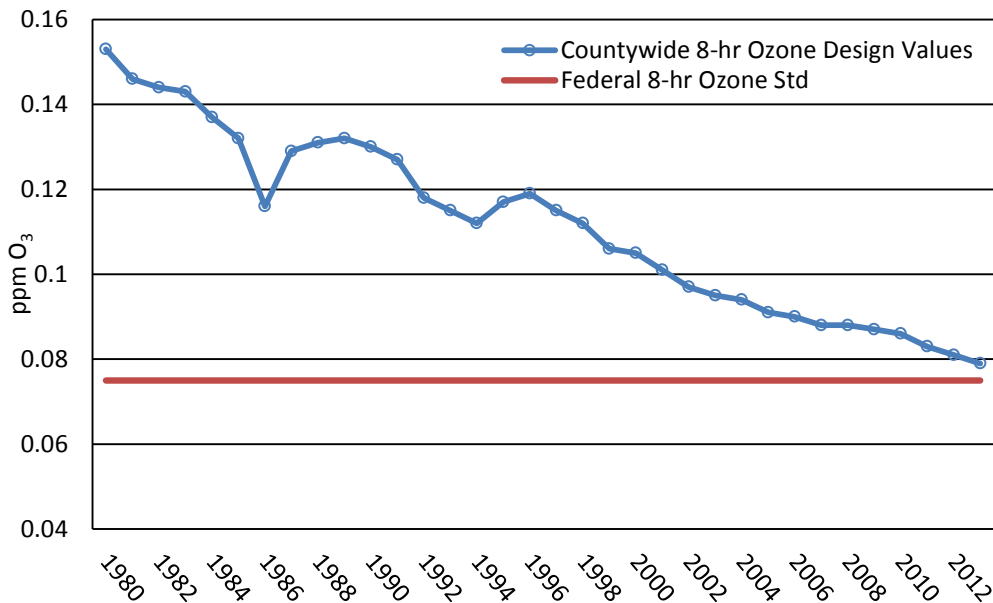
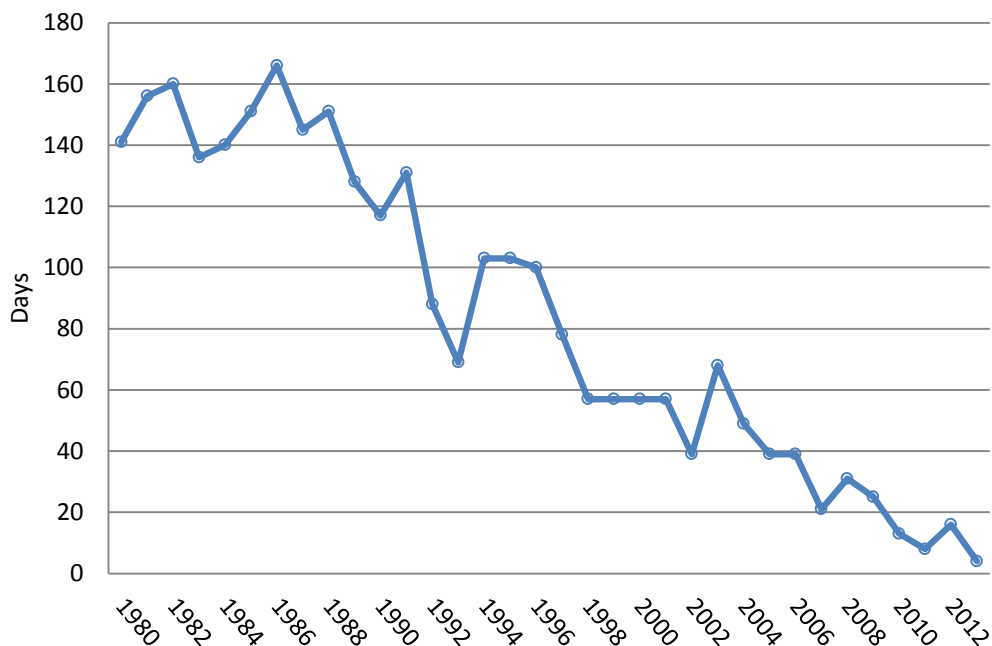


Figure 3 – Ventura County 8-hr Ozone Days Exceeding Standard



### 2.2.2 PM<sub>2.5</sub> and PM<sub>10</sub> Monitoring Network

The VCAPCD's particulate monitoring network consists of monitors for PM<sub>2.5</sub> and PM<sub>10</sub>. The PM<sub>2.5</sub> network has been operating since 1999, in response to establishment of the federal PM<sub>2.5</sub> standard in 1999. VCAPCD has had PM<sub>10</sub> monitors operating since late 1986 in Ventura County. Ventura County is in attainment of the federal PM<sub>2.5</sub> and PM<sub>10</sub> NAAQS.

The PM<sub>2.5</sub> monitoring network consists of six continuous PM<sub>2.5</sub> FEM monitors, one at the El Rio, Ojai, Piru, and Thousand Oaks monitoring sites, and two (primary and collocated) at the Simi Valley monitoring site.

There are no PM<sub>2.5</sub> monitors required for State Implementation Plan (SIP) or maintenance planning.

The annual PM<sub>2.5</sub> NAAQS is based on the annual weighted mean of the 24-hour averages, in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) (level: 12). The design value for the annual PM<sub>2.5</sub> NAAQS is the 3-year average annual mean concentration. Figure 4 presents the PM<sub>2.5</sub> annual average design values.

The 24-hour NAAQS for PM<sub>2.5</sub> is 35  $\mu\text{g}/\text{m}^3$ . The design value for the 24-hour PM<sub>2.5</sub> NAAQS is the 3-year average of the 98th percentile concentration in micrograms per cubic meter. Figure 5 presents the PM<sub>2.5</sub> 24-hr average design values.

**Figure 4 – Ventura County PM<sub>2.5</sub> Annual Average Design Values**

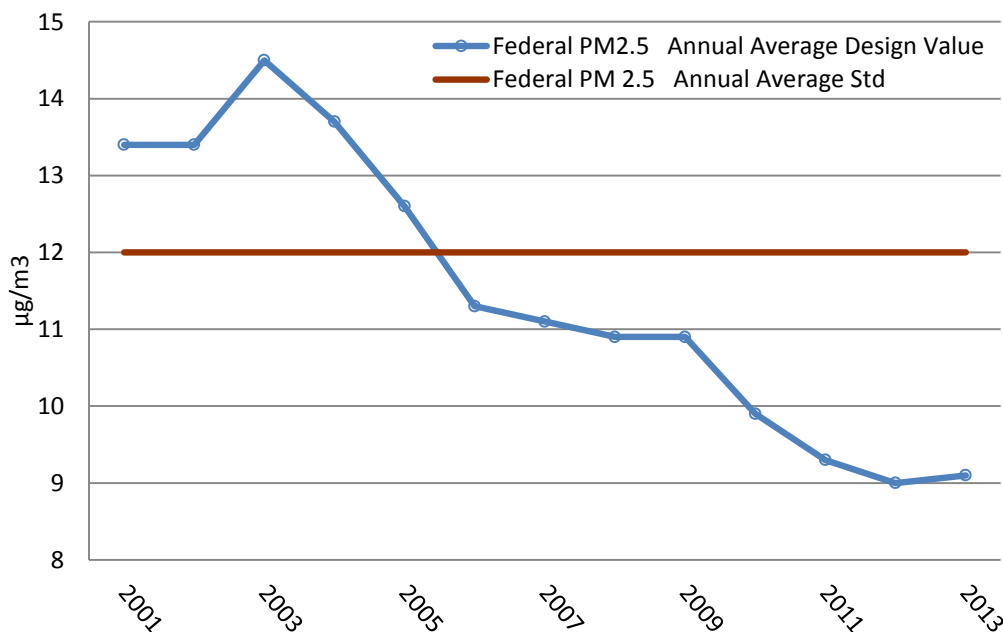
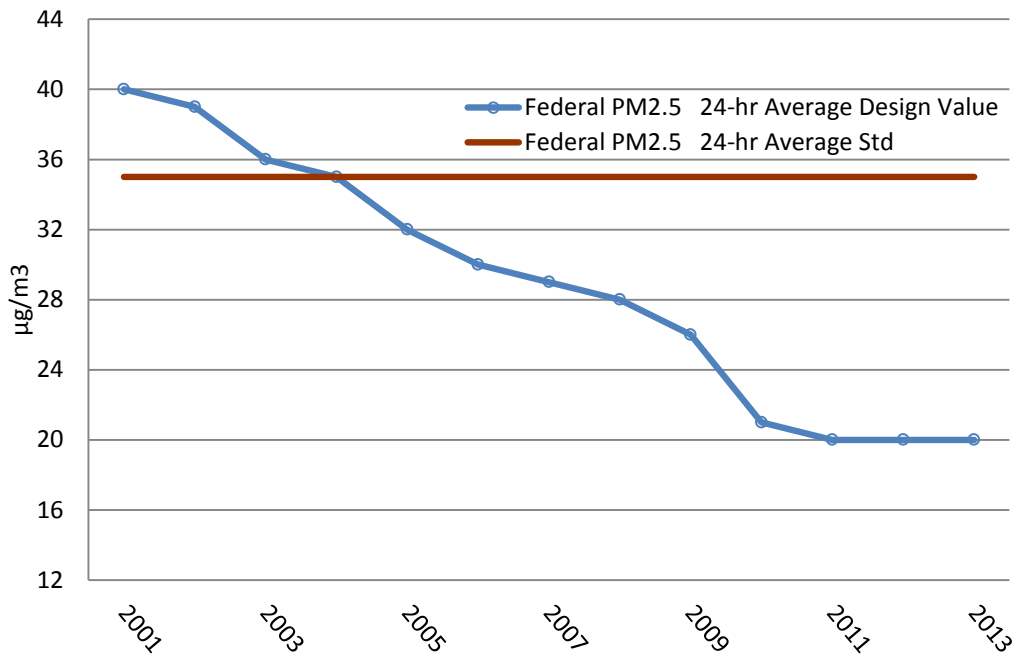


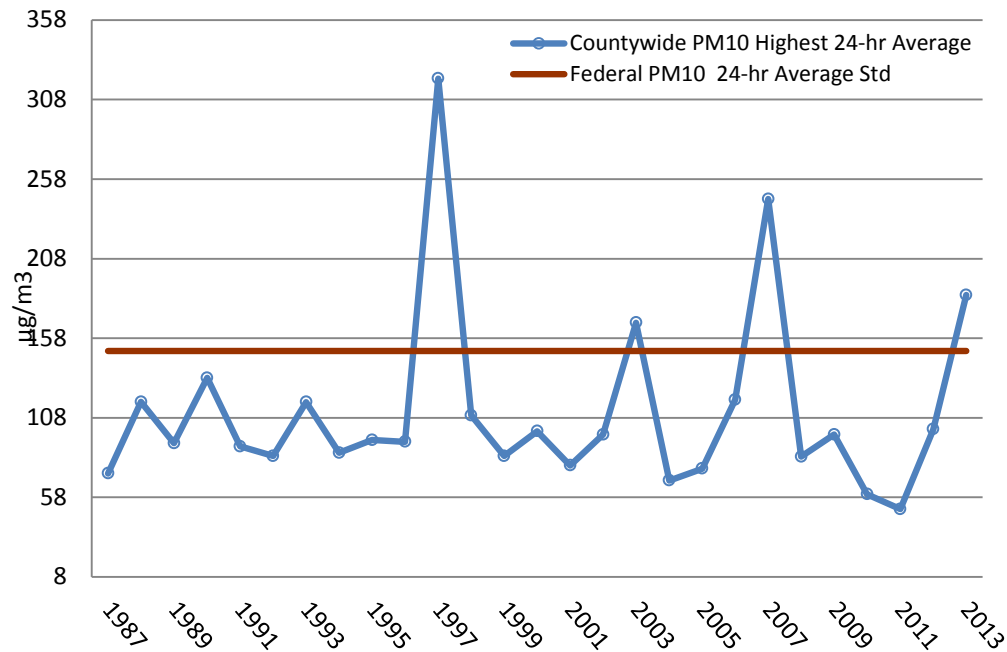
Figure 5 – Ventura County PM<sub>2.5</sub> 24-hr Average Design Values



The PM<sub>10</sub> monitoring network includes two PM<sub>10</sub> FEM monitors (El Rio and Simi Valley). The 24-hour NAAQS for PM<sub>10</sub> is set at a level not to be exceeded more than once per year, on average, over 3 years, in µg/m<sup>3</sup> (level: 150).

There are no PM<sub>10</sub> monitors required for SIP or maintenance planning.

Figure 6 presents the PM<sub>10</sub> highest 24-hr averages values through 2013.

Figure 6 – Ventura County PM<sub>10</sub> Highest 24-hr Average Values


### 2.2.3 Photochemical Assessment Monitoring Stations

Under section 182(c)(1) of the Clean Air Act and 40 CFR 58, VCAPCD operates a PAMS network. Its purpose is to evaluate trends in ozone formation within Ventura County by analyzing air samples, collected in Summa canisters, for the make-up of specific volatile organic compounds. These compounds contribute to the formation of ozone. VCAPCD has three PAMS-designated air quality monitoring sites. El Rio is designated as Type 2 (maximum precursor emission site), Simi Valley is designated as Type 3 (maximum ozone concentration site), and Simi Upper Air is designated as a Type 3 support site for collecting atmospheric structure data. Simi Upper Air is the location of VCAPCD's atmospheric wind profiler. The El Rio and Simi Valley sites collect canisters on a 1-in-3 day schedule during July, August, and September, pursuant to the California Alternative Plan III (CAP III), summarized in Table 5.

**Table 5 – Summary of VOC Sampling Requirements Specified in the PAMS CAPIII for Ventura County<sup>1</sup>**

Continuous Sampling	Trend Day Sampling <sup>2, 3</sup>	Episode Sampling <sup>3</sup>
Site Type 2 (Maximum Ozone Precursors) – El Rio		
	Four 3-hour speciated VOC canister samples collected from: 2 – 5 a.m. 5 – 8 a.m. 12 – 3 p.m. 4 – 7 p.m.	Four 3-hour speciated VOC canister samples collected from: 5 – 8 a.m. 8 – 11 a.m. 12 – 3 p.m. 4 – 7 p.m.
	Four 3-hour carbonyl samples at the above sample times.	Four 3-hour carbonyl samples at the above sample times.
Site Type 3 (Maximum Ozone Concentration) – Simi Valley		
	Two 3-hour speciated VOC canister samples collected from: 5 – 8 a.m. 4 – 7 p.m.	Four 3-hour speciated VOC canister samples collected from: 5 – 8 a.m. 8 – 11 a.m. 12 – 3 p.m. 4 – 7 p.m.

<sup>1</sup> Source: CAPIII submitted to EPA Region 9 on June 20, 2001.

<sup>2</sup> Sampling every third day during the three-month monitoring season (July 1 through September 30), following the national monitoring schedule for VOCs. El Rio's 2011 CAP III 11 p.m. – 2 a.m. PST sample time is changed to 2 – 5 a.m. PST, for commute time start which identifies non-methane organic compound loading and peak hydrocarbon times.

<sup>3</sup> Pacific Standard Time

Consistent with CAP III, VCAPCD is doing trend day sampling at our Type 2 – El Rio and Type 3 – Simi Valley sites. In addition, VCAPCD will attempt to capture all episodes (days when the maximum 8-hour ozone exceeds 0.075 ppm). In 2013, there were four days in Ventura County when the 8-hour ozone maximum exceeded 0.075 ppm.

## 2.2.4 California Air Resources Board Toxic Air Contaminant Sampling

VCAPCD collects toxic samples (metals, hexavalent chromium, and aldehydes) at the Simi Valley air monitoring site. The Simi Valley air monitoring site, one of 20 statewide sites, is part of the CARB Toxics Monitoring Network within major urban areas to provide data to determine the average annual concentrations of toxic air contaminants as input to the identification process, and to assess the effectiveness of controls.

Additionally, VCAPCD is part of the CARB toxics monitoring program for pesticides. CARB monitors pesticides at the El Rio air monitoring site.

## 2.3 Air Quality Data

VCAPCD's air monitoring stations report data to the EPA's Air Quality System (AQS) database. The data generated at these stations are public information and are available in various formats from the respective agencies. Table 6 lists some sources for air quality data.

Table 6 – Sources of Ambient Air Quality Data

Agency	Address For Data Requests	Internet Address	Data Available
Ventura County APCD	669 County Square Drive Ventura, CA 93003	<a href="http://www.vcapcd.org/">http://www.vcapcd.org/</a>	Ventura County
California Air Resources Board	PO Box 2815 Sacramento, CA 95812	<a href="http://www.arb.ca.gov/html/ds.htm">http://www.arb.ca.gov/html/ds.htm</a>	California Air Monitoring Data
United States Environmental Protection Agency	Ariel Rios Building 1200 Pennsylvania Avenue, N.W. Washington, DC 20460	<a href="http://www.epa.gov/airdata/">http://www.epa.gov/airdata/</a>	National Air Monitoring Data

Real time air quality and meteorological data is available on CARB's Air Quality and Meteorological Information System at <http://www.arb.ca.gov/aqmis2/aqmis2.php>.

Federal regulations require that air monitoring organizations submit precision and accuracy data for the data reported to AQS. VCAPCD air monitoring precision data are submitted to the EPA AQS database on a quarterly basis and are up to date as of the publication of this report. Accuracy data are reported to the EPA by CARB.

Federal regulations require the air monitoring organizations to annually submit a letter certifying that ambient data and quality assurance data are completely submitted to AQS and that the ambient data are accurate to the best of our knowledge taking into consideration the quality assurance findings. VCAPCD's 2013 annual data certification was submitted to EPA on April 30, 2014. A copy of this letter is provided in Appendix F.

### 3 Recent and Pending Modifications to the Air Monitoring Network

40 CFR 58.14(b) requires that the EPA review and approve modifications to a SLAMS monitoring network, and requires the responsible state or local agency to inform the EPA of any proposed modifications. This provides an opportunity for review and comment on the possible regulatory consequences of such action. If it is necessary to move a monitoring site, VCAPCD will consult with EPA Region 9 and CARB to discuss parallel sampling at the current and proposed sites for a predetermined period of time.

#### 3.1 Network Operations - July 2013 to June 2014

This section describes the changes made to VCAPCD's monitoring network since the publication of the 2013 Ambient Air Monitoring Network Plan, and through May 2014.

##### 3.1.1 Network Operations with No Recent Changes

No changes were made to the ozone or the California Air Resources Board's air toxics monitoring networks during this network plan reporting period.

##### 3.1.2 Recent Changes to the PM<sub>2.5</sub> and PM<sub>10</sub> Monitoring Networks

As discussed in the *2013 Ambient Air Monitoring Network Plan*, in November 2011, VCAPCD staff submitted a request to EPA Region 9 to modify its particulate matter (PM) monitoring network. The primary focus of the request was to transition from collecting particulate data via filter media (FRM) to continuous particulate sampling (FEM) at all VCAPCD air monitoring sites.

VCAPCD believes that continuous PM<sub>2.5</sub> FEM monitoring is superior to PM<sub>2.5</sub> FRM monitoring for several reasons. Continuous data is received on an hourly basis vs. FRM intervals of 1-in-3 or 1-in-6 day intervals and can be provided to the public within the hour. This allows VCAPCD staff to alert the public when PM levels are high, aids staff in air quality forecasting, and allows for more informed "burn/no-burn" day decisions. It allows the public, especially those considered to be sensitive groups, to have information to make decisions about outside activities when poor air quality may impact their health. It saves resources and benefits the environment because it reduces staff time and vehicle miles travelled related to setup and retrieval of filter samples. In addition, it eliminates the need to run a mass laboratory for pre- and post-weighing of filter samples. Finally, by having one hour interval sample readings, when consistent across all agencies in the country, it will allow EPA to align ozone and particulate sampling into the same time periods.

EPA responded to the request for modifications on February 11, 2012 (letter was included in

the 2012 *Ambient Air Monitoring Network Plan*). EPA stated they approved of the “final PM<sub>2.5</sub> network as outlined in the letter, if the study shows good agreement between the FRMs and FEMs.”

From 2012 through 2013, a side-by-side comparison study of FRM vs. FEM measurement methods was completed. The comparison study included PM<sub>2.5</sub> FRM vs. FEM at the El Rio, Thousand Oaks, and Simi Valley monitoring sites; and PM<sub>10</sub> FRM vs. FEM at the El Rio and Simi Valley monitoring sites. The comparison results were shared with EPA Region 9 and CARB via email then followed by conference calls. The outcome was approval by CARB to discontinue FRM particulate measurements (see letters dated March 18, 2014 and March 27, 2014 in Appendix F).

The new collocated PM<sub>2.5</sub> FEM at the Simi Valley site became operational April 1, 2014. PM<sub>2.5</sub> FRM sampling at the El Rio, Thousand Oaks, and Simi Valley, and PM<sub>10</sub> FRM sampling at El Rio and Simi Valley was discontinued in April and May 2014. This occurred following the annual CARB performance audits, which also became the final shutdown audits for the FRM particulate monitors.

The recent changes to the PM<sub>2.5</sub> and PM<sub>10</sub> monitoring networks are reflected in Appendix B, Detailed Site Information.

On June 29, 2013, VCAPCD replaced a PM<sub>2.5</sub> non-FEM sampler with a PM<sub>2.5</sub> FEM sampler at the Simi Valley monitoring site. The request was made because the PM<sub>2.5</sub> non-FEM sampler was aged and in need of replacement. Kent Field, Manager of VCAPCD Monitoring Division at the time, informally requested funding for the replacement sampler in January 2013 via email to Katherine Hoag, EPA, Region 9 (see Appendix F). The official request for funding was made and granted through the EPA Section 103 Grant Application process for the PM<sub>2.5</sub> Monitoring Grant.

Additionally, in July 2013, VCAPCD began reporting PM<sub>10</sub>, in local conditions (parameter code 85101, parameter occurrence code (POC) 3, method code 122, units 105) for El Rio and Simi Valley monitoring sites. Our previous data acquisition system/data management system (DAS/DMS), EDAS, was not capable of performing calculations necessary for reporting PM<sub>10</sub> in local conditions. The new system, AirVision (see Section 3.1.6), has the capability to internally perform the calculations (involving temperature and pressure).

### **3.1.3 Recent Changes to the Speciation Trends Network, Chemical Speciation Network**

Under the Speciation Trends Network (STN), as part of the Chemical Speciation Network (CSN), VCAPCD operated a speciation monitor at the Simi Valley site. Samples collected were analyzed by an EPA contractor. The samplers, a Spiral Ambient Speciation Sampler



(SASS) and University Research Glassware (URG) carbon sampler, were maintained by VCAPCD for EPA. The Met One SASS sampler had been operational since December 1, 2001, and the URG 3000 N sampler since March 1, 2009.

The CSN is being reviewed by EPA to get more value out of the CSN sites and focus the monitoring effort to National Core (NCore), Improve, and PAMS sites. VCAPCD is not NCore or Improve, and PAMS re-engineering documentation indicates that Simi Valley will not be part of the future PAMS program.

VCAPCD began discussions with Katherine Hoag and Meredith Kurpius, both at EPA Region 9, and Elizabeth Landis at EPA's Office of Air Quality Planning and Standards, regarding the shutdown of the speciation sampling at Simi Valley. On December 18, 2013, VCAPCD requested to discontinue CSN sampling at the Simi Valley air monitoring site ("Request to discontinue CSN Simi Valley sampling", see Appendix F). Approval to end CSN sampling was given effective January 1, 2014 (see formal approval letter dated March 26, 2014 in Appendix F).

### **3.1.4 Recent Changes to the PAMS Network**

The future of VCAPCD's participation in the PAMS program is uncertain. It is likely that VCAPCD will be excluded from the PAMS network in the future due to PAMS re-engineering as sited from multiple EPA sources. In general, VCAPCD has been directed to not purchase new equipment related to its PAMS program. As a result, VCAPCD has reduced monitoring within its PAMS program when equipment has failed and also due to the loss of key personnel.

VCAPCD is not monitoring continuous hydrocarbons. According to CAP III, both sites were required to operate continuous hydrocarbon sampling year round. The Simi Valley site underwent equipment failure (both the analyzer and the hydrogen generator), and a request to discontinue hydrocarbon sampling at Simi Valley was proposed in 2013. Approval via letter from Meredith Kurpius dated December 17, 2013 states that EPA headquarters approved discontinuation of continuous hydrocarbon sampling at Simi Valley – Cochran Street monitoring station (see Appendix F).

Hydrocarbon sampling as part of the PAMS program at the El Rio site was discontinued in 2010. Research shows that the El Rio analyzer was moved to Simi Valley to replace a failed analyzer there. In the FY 2014 105 grant objectives, it was reported that the El Rio continuous hydrocarbon sampler failed in 2010 and was not replaced.

VCAPCD will not collect PAMS carbonyl samples for the 2014 season. VCAPCD's carbonyl sampler failed in 2010 and a borrowed sampler was returned in February 2014. Due to PAMS re-engineering, and the probability that VCAPCD will no longer be

included in the future PAMS network, VCAPCD has been advised by EPA Region 9 to hold off on purchasing new equipment for the program.

VCAPCD has hired a contractor, Atmospheric Analysis and Consulting, Inc. (AAC), to perform the collection of field samples, the laboratory sample analysis, perform quality control/quality assurance of data (QC/QA), and the final data reporting to EPA. VCAPCD decided to hire a contractor to do the PAMS work when the VCAPCD chemist took another position within the agency in January 2014.

VCAPCD will continue operation of the Simi Valley atmospheric profiler (Simi Upper Air). The atmospheric profiler in Simi Valley (Simi Upper Air site) has been a very useful tool in determining lower atmosphere winds and temperature structure up to 1 to 2 kilometers. The profiler became operational in July 1995 and continued operation until November 2010. In November 2010, the obsolete computer and associated hardware could no longer be maintained or repaired. In April 2011, a company was found that could rebuild the profiler. In May 2012, the profiler was upgraded and became operational again. The upgrade was fraught with problems for the first eight months. Through negotiations with assistance from Ventura County legal counsel, the company made a genuine effort and has resolved most of the problems. There are some inadequacies in the graphics design but all hardware appears to be working as intended. In early August 2014, VCAPCD plans to accept the contract as completed and will begin a two-year warranty period. It is expected that the Simi Valley atmospheric profiler will remain part of the meteorological monitoring network even if VCAPCD is no longer part of the PAMS network.

### **3.1.5 Recent Changes to the Meteorological Monitoring Network**

The only change to the VCAPCD Meteorological Monitoring Network is the addition of a rain gauge to the Simi Valley site on January 1, 2014.

### **3.1.6 Recent Changes to the Data Acquisition and Management System**

Our *2013 Ambient Air Monitoring Network Plan* described the planned transition to a new DAS/DMS. The DAS/DMS software is a product from the Agilaire Corporation called AirVision, and the transition was completed in December 2013. In 2014, VCAPCD will be refining the operation of AirVision to better meet its needs. It is expected that the new system will save time and resources by allowing staff to monitor field analyzers remotely. In addition the new system should improve the operation of nightly calibrations, make data quality analysis and quality control more efficient, and streamline data processing.

### **3.1.7 Recent Changes to Laboratory Filter Processing Operations**

In December 1998, VCAPCD established a climate-controlled gravimetric laboratory for processing PM<sub>2.5</sub> filters. VCAPCD also assisted other air districts in California by processing

their PM<sub>2.5</sub> filters. In 2013, after 14 years of 24/7 use, the climate controlling equipment was becoming unreliable. The replacement cost for this unit was \$43,000.

Also during 2013, VCAPCD was working towards its goal to end all filter-based particulate sampling within the district. VCAPCD had collocated beta attenuation monitors (BAM) 1020 PM<sub>2.5</sub> FEM samplers at all sites for an ongoing data comparison to the PM<sub>2.5</sub> FRM samplers.

In the spring of 2013, because of the unreliability of the climate controlling equipment and the high cost to replace it, VCAPCD decided to end filter processing with its last two clients, the San Joaquin Valley Air Pollution Control District and CARB.

When sufficient data was available for an FEM vs. FRM comparison, VCAPCD processed the data using the EPA statistical tools available for this comparison. Upon consultation and direction from EPA and CARB, CARB approved ending all FRM filter-based sampling operations in February 2014. All FRM sampling was discontinued in April and May 2014 following the annual CARB performance audits at all VCAPCD monitoring sites. CARB completed a final gravimetric laboratory audit on April 29, 2014, the last filters were processed in mid- May 2014, and the gravimetric laboratory was closed.

Equipment in the gravimetric laboratory, including the climate-controlling unit and the PM<sub>2.5</sub> balances, will be donated to California air agencies that can use them.

### **3.1.8 Replacement of Analyzers and Equipment Since Last Reporting Period**

Many of the VCAPCD older analyzers are not capable of providing metadata to our new DAS/DMS system. In the interest of keeping up with technology and making our network more efficient, we have a replacement schedule set up for the different analyzers, samplers, and calibration equipment. Ozone analyzers, PM<sub>2.5</sub> FEMs, and calibration devices will be considered for replacement every 5 years. NO<sub>x</sub>/NO/NO<sub>2</sub> analyzers and data loggers will be considered for replacement every 8 years. Meteorological equipment will be considered for replacement every 7 to 15 years. Uniformity of equipment throughout our network allows us to have a small stock of replacement parts for a cost effective maintenance program.

Table 7 summarizes the analyzer and equipment replacement that has taken place at VCAPCD air monitoring sites since preparation of the *2013 Ambient Air Monitoring Network Plan*.

Table 7 – Analyzer and Equipment Replacement – July 2013 to June 2014

Date(s)	Equipment	Event	Notes
11/2012 – 01/2013	Flow calibration devices	Completed	Enables more efficient calibration of PM <sub>2.5</sub> FEM and PM <sub>10</sub> FEM continuous particulate samplers.
01/2012	Trace NOy analyzer to continuous NO <sub>2</sub> analyzer	Completed	Converted an unneeded trace NOy monitor. One-fifth the cost of a new analyzer, saving VCAPCD \$11,000. Analyzer has been placed in service.
01/2013 – 05/2013	Site computers – all sites	Completed	Last replaced in 2006. Used to communicate, via the internet, between the VCAPCD office and site datalogger. Used on site for numerous station tasks.
01/2013 – 04/2013	Wind sensors	Completed	Replace RM Young Aerovane wind sensors with Climatronic wind sensors at El Rio and Simi Upper Air sites. All sites now equipped with Climatronic.
01/2013 – 04/2013	Temperature/humidity sensors	Completed	Replaced all sites with Met One equipment. Temperature sensor life: 10 - 20 years. Humidity sensor life: 5 – 10 years.
05/2013 & 10/2013	Dilution Calibrators	Two purchased	All (6) of our dilution calibrators are approaching 15 yrs old. One replaced a failed calibrator at the El Rio site. One is not yet installed. We are planning to purchase two more during fiscal year 2014-15.
08/2013	Ozone analyzers	Four purchased	All of our ozone analyzers are 10 - 15 yrs old. Two new analyzers have been deployed. Two other new analyzers did not pass acceptance testing. They were returned to the factory for repair. As old analyzers are due for major maintenance they are replaced with a new unit. Old analyzers will be used for parts until all units are replaced and backups are purchased. Two more ozone analyzers are scheduled to be purchased during fiscal year 2014-15.
06/2013	NO <sub>2</sub> /NO <sub>x</sub> /NO analyzer	Purchased	Intended to replace a 10 year old analyzer at the El Rio site. Acceptance testing complete but has not been deployed.
05/2013	PM <sub>2.5</sub> FEM continuous particulate sampler	Completed	Replaced an 11 year old PM <sub>2.5</sub> non-FEM BAM at the Simi Valley site.
5/18/2014	PM <sub>2.5</sub> FEM sampler probe inlets - raised	Completed	In response to the early May 2013 CARB audits; to remove any question of roof safety railing interference or adjacent building proximity that may affect air flow to the probe inlet.
Spring 2015 (Estimated completion)	Air inlet sampling manifolds	Purchased	Associated with the replacement of gaseous air quality analyzers and calibrators; replaced due to deterioration and the need to automate nightly calibrations.
12/2013	Zero air generator	Purchased	30 liter zero air generator purchased to replace 15 year old 10 liter zero air generator. Will be deployed with the next scheduled major maintenance of the 10 liter unit.

## 3.2 Network Operations – Post May 2014

Generally speaking, Ventura County monitoring network operations are expected to remain relatively stable over the next couple of years. This section describes proposed future changes for VCAPCD's monitoring network.

### 3.2.1 Network Operations with No Proposed Changes

We do not anticipate any changes to the ozone, PM<sub>2.5</sub>, PM<sub>10</sub>, or the meteorological networks during this network plan period.

### 3.2.2 Future Changes - New NO<sub>2</sub> Near-Road Monitoring Station

On February 9, 2010, EPA promulgated new minimum monitoring requirements for the NO<sub>2</sub> Monitoring Network in support of a newly revised 1-hour NO<sub>2</sub> NAAQS and the retained annual NAAQS. In the new monitoring requirements, state and local air monitoring agencies are required to install Near-Road NO<sub>2</sub> monitoring stations at locations where peak hourly NO<sub>2</sub> concentrations are expected to occur within the Near-Road environment in larger urban areas. State and local air agencies are required to consider traffic volumes, fleet mix, roadway design, traffic congestion patterns, local terrain or topography, and meteorology in determining where a required Near-Road NO<sub>2</sub> monitor should be placed. In 40 CFR Part 58 Appendix D, the EPA requires state and local air agencies to operate one Near-Road NO<sub>2</sub> monitor in any core-based statistical area (CBSA) with a population of 500,000 or more persons.

For site location requirements, 40 CFR Part 58, Appendix E states: "As near as practicable to the outside nearest edge of the traffic lanes of the target road segment; but shall not be located at a distance greater than 50 meters, in the horizontal, from the outside nearest edge of the traffic lanes of the target road segment." In their Technical Assistance Document (TAD) for help with siting, EPA recommends that the target distance for near-road NO<sub>2</sub> monitor probes be within 20 meters of the target road whenever possible.

Preliminary results of traffic data indicate that the area with the highest traffic counts is the U.S. Highway 101 Freeway, east of the State Route 23 interchange. Our preliminary review of the meteorology of the area, and the other factors for considering site selection and location in the TAD (*Near-Road NO<sub>2</sub> Monitoring Technical Assistance Document*, EPA-454/B-12-002, June 2012) indicates that a possible site location could be on the dirt median, on the north side of U.S. Highway 101, at approximately 3600 Duesenberg Drive, Thousand Oaks, California (N34.161889, W-118.830872).

In October 2012, EPA proposed a revision to the Near-Road NO<sub>2</sub> monitoring requirement of site establishment by January 1, 2013. The EPA proposal, *Revision to Ambient Nitrogen Dioxide Monitoring Requirements* (proposed revision), was published in the *Federal*

*Register* on October 19, 2012 (77 *Federal Register* 64244). The proposed revision states that a Near-Road NO<sub>2</sub> monitoring site would be required in each CBSA with a population more than 500,000, but less than 1 million, by January 1, 2017. Ventura County has a population of approximately 823,318 (as of 2010 census); therefore, one Near-Road NO<sub>2</sub> site would be required to be operational by January 1, 2017.

In 2015, provided upon EPA funding assistance, VCAPCD will begin the process of establishing a Near-Road NO<sub>2</sub> site. This will involve site acquisition and permission for the chosen location, the hiring of an additional Air Quality Instrument Technician to assist with the added workload, and the procurement of all needed equipment to establish a site by January 1, 2017.

### **3.2.3 Future Changes to the PAMS Network**

Any changes to the PAMS Network are dependent upon the results of PAMS re-engineering as discussed in Section 3.1.4. VCAPCD will coordinate with EPA once EPA completes their evaluation of the PAMS program for future years.

40 CFR 58 Appendix D, Section 5 specifies the network design for the PAMS program. Federal regulations require the addition of reactive nitrogen compounds (NO<sub>y</sub>) monitoring at Type 3 sites (Simi Valley) and trace carbon monoxide (CO) monitoring at Type 2 sites (El Rio). We have not installed the instrumentation due to widespread questioning by Federal and state air agency staff of the rationale of monitoring NO<sub>y</sub> and trace CO in Southern California.

### **3.2.4 Future Replacement of Analyzers and Equipment**

In an effort to save staff time and maintain data collection objectives, VCAPCD has an equipment replacement schedule set up to replace old equipment as it begins to fail. Table 8 is the anticipated analyzer and equipment replacement schedule for the next few fiscal years. This schedule is updated on an as-needed basis; if current equipment continues to function well, then replacement dates are postponed.

Table 8 – Analyzer and Equipment Replacement – Post May 2014

Date(s)	Equipment	Event	Notes
FY 2014/2015	Two ozone analyzers	Planned	
"	Two dilution calibrators		
FY 2015/2016	Two ozone analyzers	Planned	
"	One dilution calibrators	Planned	
"	Equipment for a new Near-Road NO <sub>2</sub> monitoring site	Planned	Specific equipment unknown (as of June 2014). Begin preparation for setup of new site dependent on EPA funding.
FY 2016/2017	One ozone analyzer	Planned	
"	One PM <sub>2.5</sub> FEM samplers	Planned	
"	Equipment for new Near-Road NO <sub>2</sub> site	Planned	Specific equipment unknown (as of June 2014). Complete acquisition and installation of equipment will be dependent on EPA funding for new site.
FY 2017/2018	One ozone analyzer	Planned	
"	Site computers – all sites	Planned	Only if needed - technological improvements of air quality analyzers may make use of computers obsolete.
"	AirVision data management computer	Planned	For VCAPCD office

This page intentionally left blank



## Appendix A 2014 ANNUAL AIR MONITORING NETWORK PLAN CHECKLIST

The VCAPCD has included this appendix in an effort to clearly communicate the location of information required as part of Annual Network Plans (ANP) per 40 CFR 58. Table 9 is taken from the *2014 Annual Air Monitoring Network Plan Checklist*, provided to VCAPCD by Gwen Yoshimura, Air Quality Analysis Office, EPA Region 9. District staff replaced the column “Was the info submitted? If yes, page #s. Flag if incorrect?” in the original checklist with “Location of submitted info” and deleted the column “Does the information provided meet the requirement?” Otherwise, the content of the table is the same as the original checklist received by Ms. Yoshimura.

**Table 9 – Location of Submitted Information – 2014 Ambient Air Monitoring Network Plan**

	ANP requirement	Citation within 40 CFR 58	Location of Submitted Info	Notes
<b>GENERAL PLAN REQUIREMENTS</b>				
1.	Submit plan by July 1 <sup>st</sup>	58.10 (a)(1)	Cover Letter	Due to staffing issues, plan was submitted after July 1
2.	30-day public comment / inspection period <sup>3</sup>	58.10 (a)(1), 58.10 (a)(2)	Section 1	
3.	Modifications to SLAMS network – case when we are not approving system modifications	58.10 (a)(2) 58.10 (b)(5) 58.10(e) 58.14	Section 3 and Appendix F	(Item #4 in 2013 checklist) PM <sub>2.5</sub> non-FEM to PM <sub>2.5</sub> FEM replacement at Simi Valley – EPA contact documentation provided in Appendix F
4.	Modifications to SLAMS network – case when we are approving system modifications per 58.14	58.10 (a)(2) 58.10 (b)(5) 58.10(e) 58.14	Section 3 and Appendix F	

<sup>3</sup> The affected state or local agency must document the process for obtaining public comment and include any comments received through the public notification process within their submitted plan.

Table 9 – Location of Submitted Information – 2014 Ambient Air Monitoring Network Plan (cont'd)

	<b>ANP requirement</b>	<b>Citation within 40 CFR 58</b>	<b>Location of Submitted Info</b>	<b>Notes</b>
5.	Does plan include documentation (e.g., attached approval letter) for system modifications that have been approved since last ANP approval?		Appendix F	
6.	Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal	58.10 (b)(5)	NA	
7.	<i>A plan for establishing a near-road PM<sub>2.5</sub> monitor (in CBSAs ≥ 2.5 million) by 1/1/2015</i>	58.10(a)(8)(i)	NA	
8.	<i>A plan for establishing a near-road CO monitor (in CBSAs ≥ 2.5 million) by 1/1/2015</i>	58.10(a)(7) 58.13(e)(1)	NA	
9.	<i>NO<sub>2</sub> plan for establishment of 2<sup>nd</sup> near-road monitor by 1/1/2015</i>	58.10 (a)(5)(iv)	NA	
10.	Precision/Accuracy reports submitted to AQS	58.16(a); App A, 1.3 and 5.1.1	Appendix F	
11.	Annual data certification submitted	58.15 App. A 1.3	Appendix F	
12.	SPMs operating an FRM/FEM/ARM that meet Appendix E also meet either Appendix A or an approved alternative.	58.11 (a) (2)	NA	
13.	SPMs operating FRM/FEM/ARM monitors for over 24 months are listed as comparable to the NAAQS or the agency provided documentation that requirements from Appendices A, C, or E were not met. <sup>4</sup>	58.20(c)	NA	

<sup>4</sup> This requirement only applies to monitors that are eligible for comparison to the NAAQS per 40 CFR §§58.11(e) and 58.30.

Table 9 – Location of Submitted Information – 2014 Ambient Air Monitoring Network Plan (cont'd)

	<b>ANP requirement</b>	<b>Citation within 40 CFR 58</b>	<b>Location of Submitted Info</b>	<b>Notes</b>
14.	For agencies that share monitoring responsibilities in an MSA/CSA: this agency meets full monitoring requirements or an agreement between the affected agencies and the EPA Regional Administrator is in place	App D 2(e)	Section 2.1	(Item #44 in 2013 checklist) Roles and Responsibilities document is under development between CARB (our PQAO) and VCAPCD.
<b>GENERAL PARTICULATE MONITORING REQUIREMENTS (PM<sub>10</sub>, PM<sub>2.5</sub>, Pb-TSP, Pb-PM<sub>10</sub>)</b>				
15.	Designation of a primary monitor if there is more than one monitor for a pollutant at a site.	Need to determine collocation	Appendix B	
16.	Distance between collocated monitors (Note: waiver request or the date of previous waiver approval must be included if the distance deviates from requirement.)	App. A 3.2.5.6 and 3.2.6.3	Appendix B	
<b>PM<sub>2.5</sub>—SPECIFIC MONITORING REQUIREMENTS</b>				
17.	Document how states and local agencies provide for the review of changes to a PM <sub>2.5</sub> monitoring network that impact the location of a violating PM <sub>2.5</sub> monitor.	58.10 (c)	Appendix C	
18.	Identification of any PM <sub>2.5</sub> FEMs and/or ARMs not eligible to be compared to the NAAQS due to poor comparability to FRM(s) (Note 1: must include required data assessment.) (Note 2: Required SLAMS must monitor PM <sub>2.5</sub> with <u>NAAQS</u> -comparable monitor at the required sample frequency.)	58.10 (b)(13) 58.11 (e)	NA	
19.	Minimum # of monitors for PM <sub>2.5</sub> [Note 1: should be supported by MSA ID, MSA population, DV, # monitors, and # required monitors] [Note 2: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D, 4.7.1(a) and Table D-5	Appendix C	

Table 9 – Location of Submitted Information – 2014 Ambient Air Monitoring Network Plan (cont'd)

	<b>ANP requirement</b>	<b>Citation within 40 CFR 58</b>	<b>Location of Submitted Info</b>	<b>Notes</b>
20.	Minimum monitoring requirements for continuous PM <sub>2.5</sub>	App D 4.7.2	Appendix C	
21.	PM <sub>2.5</sub> collocation	App A 3.2.5	Appendix E	
22.	PM <sub>2.5</sub> Chemical Speciation requirements for official STN sites	App D 4.7.4	NA	
23.	Identification of sites suitable and sites not suitable for comparison to the annual PM <sub>2.5</sub> NAAQS as described in Part 58.30	58.10 (b)(7)	Appendix B	
24.	Required PM <sub>2.5</sub> sites represent area-wide air quality	App D 4.7.1(b)	Table 3	
25.	For PM <sub>2.5</sub> , at least one site at neighborhood or larger scale in an area of expected maximum concentration	App D 4.7.1(b)(1)	Table 3 and Appendix B	
26.	If additional SLAMS PM <sub>2.5</sub> is required, there is a site in an area of poor air quality	App D 4.7.1(b)(2)	NA	
27.	States must have at least one PM <sub>2.5</sub> regional background and one PM <sub>2.5</sub> regional transport site.	App D 4.7.3	NA	
28.	Sampling schedule for PM <sub>2.5</sub> - applies to year-round and seasonal sampling schedules (note: date of waiver approval must be included if the sampling season deviates from requirement)	58.10 (b)(4) 58.12(d) App D 4.7 EPA flowchart	Appendix B	(Item #52 in 2013 checklist) All PM <sub>2.5</sub> sampling is continuous FEM now, so 2013 comment is NA
29.	Frequency of flow rate verification for manual PM <sub>2.5</sub> monitors audit	App A 3.3.2	NA	
30.	Frequency of flow rate verification for automated PM <sub>2.5</sub> monitors audit	App A 3.2.3	Appendix B	
31.	Dates of last two semi-annual flow rate audits for PM <sub>2.5</sub> monitors	App A, 3.2.4 and 3.3.3	Appendix B	
<b>PM<sub>10</sub> –SPECIFIC MONITORING REQUIREMENTS</b>				
32.	Minimum # of monitors for PM <sub>10</sub>	App D, 4.6 (a) and Table D-4	Appendix C	

Table 9 – Location of Submitted Information – 2014 Ambient Air Monitoring Network Plan (cont'd)

	<b>ANP requirement</b>	<b>Citation within 40 CFR 58</b>	<b>Location of Submitted Info</b>	<b>Notes</b>
33.	Manual PM <sub>10</sub> method collocation (note: continuous PM <sub>10</sub> does not have this requirement)	App A 3.3.1	NA	
34.	Sampling schedule for PM <sub>10</sub>	58.10 (b)(4) 58.12(e) App D 4.6	Appendix B	(Item #53 in 2013 checklist) All PM <sub>10</sub> sampling is continuous FEM now, so 2013 comment is NA
35.	Frequency of flow rate verification for manual PM <sub>10</sub> monitors audit	App A 3.3.2	NA	
36.	Frequency of flow rate verification for automated PM <sub>10</sub> monitors audit	App A 3.2.3	Appendix B	
37.	Dates of last two semi-annual flow rate audits for PM <sub>10</sub> monitors	App A, 3.2.4 and 3.3.3	Appendix B	(Item #35 in 2013 checklist) Included three most recent audit dates since in different calendar years
<b>Pb –SPECIFIC MONITORING REQUIREMENTS</b>				
38.	Minimum # of monitors for non-NCore Pb [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D 4.5 58.13(a)	NA	
39.	Pb collocation: for non-NCore sites	App A 3.3.4.3	NA	
40.	Any source-oriented Pb site for which a waiver has been granted by EPA Regional	58.10 (b)(10)	NA	
41.	Any source-oriented Pb site for which a waiver has been requested or granted by EPA Regional Administrator for use of Pb-PM <sub>10</sub> in lieu of Pb-TSP	58.10 (b)(11)	NA	
42.	Designation of any Pb monitors as either source-oriented or non-source oriented	58.10 (b)(9)	NA	
43.	Sampling schedule for Pb	58.10 (b)(4) 58.12(b) App D 4.5	NA	
44.	Frequency of one-point flow rate verification for Pb monitors audit	App A 3.3.4.1	NA	

Table 9 – Location of Submitted Information – 2014 Ambient Air Monitoring Network Plan (cont'd)

	<b>ANP requirement</b>	<b>Citation within 40 CFR 58</b>	<b>Location of Submitted Info</b>	<b>Notes</b>
45.	Dates of last two semi-annual flow rate audits for Pb monitors	App A 3.3.4.1	NA	
<b>GENERAL GASEOUS MONITORING REQUIREMENTS</b>				
46.	Frequency of one-point QC check (gaseous)	App. A 3.2.1	Appendix B	
47.	Date of last Annual Performance Evaluation (gaseous)	App. A 3.2.2	Appendix B	(Item #34 in 2013 checklist) Included 2013 and 2014 dates
<b>O<sub>3</sub> –SPECIFIC MONITORING REQUIREMENTS</b>				
48.	Minimum # of monitors for O <sub>3</sub> [Note: should be supported by MSA ID, MSA population, DV, # monitors, and # required monitors] (see footnote) <sup>5</sup>	App D, 4.1(a) and Table D-2	Appendix C	
49.	Identification of maximum concentration O <sub>3</sub> monitor(s)	App D 4.1 (b)	Section 2.2.1	
50.	Sampling season for O <sub>3</sub> (Note: date of waiver approval must be included if the sampling season deviates from requirement)	58.10 (b)(4) App D, 4.1(i)	Section 2.2.1 and Appendix B	
<b>NO<sub>2</sub> –SPECIFIC MONITORING REQUIREMENTS</b>				
51.	Minimum monitoring requirement for single near-road NO <sub>2</sub> monitor (in CBSA ≥ 1 million) by 1/1/2014	App D 4.3.2	NA	
52.	Minimum monitoring requirements for area-wide NO <sub>2</sub> monitor in location of expected highest NO <sub>2</sub> concentrations representing neighborhood or larger scale (operation required by January 1, 2013)	App D 4.3.3	NA	
53.	Minimum monitoring requirements for susceptible and vulnerable populations monitoring (aka RA40) NO <sub>2</sub> (operation required by January 1, 2013)	App D 4.3.4	NA	

<sup>5</sup> Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements. In addition, ozone monitors that do not meet traffic count/distance requirements to be neighborhood scale (40 CFR 58 Appendix E, Table E-1) cannot be counted towards minimum monitoring requirements.

Table 9 – Location of Submitted Information – 2014 Ambient Air Monitoring Network Plan (cont'd)

	<b>ANP requirement</b>	<b>Citation within 40 CFR 58</b>	<b>Location of Submitted Info</b>	<b>Notes</b>
54.	Identification of required NO <sub>2</sub> monitors as either near-road, area-wide, <i>or vulnerable and susceptible population (aka RA40)</i>	58.10 (b)(12)	Table 1 and Appendix C	
<b>SO<sub>2</sub> –SPECIFIC MONITORING REQUIREMENTS</b>				
55.	Minimum monitoring requirements for SO <sub>2</sub> [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D 4.4	NA	
<b>NCORE –SPECIFIC MONITORING REQUIREMENTS</b>				
56.	NCORE site and all required parameters operational	58.10 (a)(3); Pb collocation App. A 3.3.4.3; PM <sub>10-2.5</sub> minimum monitoring App. D 4.8; PM <sub>10-2.5</sub> sampling schedule 58.10 (b)(4) 58.12(f) App D 4.8; PM <sub>10-2.5</sub> collocation App. A 3.3.6	NA	
<b>SITE OR MONITOR - SPECIFIC REQUIREMENTS (OFTEN INCLUDED IN DETAILED SITE INFORMATION TABLES)</b>				
57.	AQS site identification number for each site	58.10 (b)(1)	Appendix B	
58.	Location of each site: street address and geographic coordinates	58.10 (b)(2)	Appendix B	
59.	MSA, CBSA, CSA or other area represented by the monitor	58.10 (b)(8)	Appendix B	

Table 9 – Location of Submitted Information – 2014 Ambient Air Monitoring Network Plan (cont'd)

	<b>ANP requirement</b>	<b>Citation within 40 CFR 58</b>	<b>Location of Submitted Info</b>	<b>Notes</b>
60.	Parameter occurrence code for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	Appendix B	
61.	Statement of purpose for each monitor	58.10 (a)(1)	Appendix B	
62.	Basic monitoring objective for each monitor	App D 1.1 58.10 (b)(6)	Appendix B	
63.	Site type for each monitor	App D 1.1.1	Appendix B	
64.	Monitor type for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	Appendix B	
65.	Scale of representativeness for each monitor as defined in Appendix D	58.10(b)(6); App D	Section 2.2	
66.	Parameter code for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	Appendix B	(Item #49 in 2013 checklist) PM <sub>10</sub> FEM at Simi Valley was listed as 81102-3 in 2013 Plan. The “-3” at the end of the parameter referred to the POC, and is now referred to in a manner consistent with all other parameters.
67.	Method code and description (e.g., manufacturer & model) for each monitor	58.10 (b)(3); App C 2.4.1.2	Appendix B	
68.	Sampling start date for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	Appendix B	
69.	Distance of monitor from nearest road	App E 6	Appendix B	



Table 9 – Location of Submitted Information – 2014 Ambient Air Monitoring Network Plan (cont'd)

	<b>ANP requirement</b>	<b>Citation within 40 CFR 58</b>	<b>Location of Submitted Info</b>	<b>Notes</b>
70.	Traffic count of nearest road	App E	Appendix B	
71.	Groundcover	App E 3(a)	Appendix B	
72.	Probe height	App E 2	Appendix B	
73.	Distance from supporting structure	App E 2	Appendix B	
74.	Distance from obstructions on roof	App E 4(b)	Appendix B	
75.	Distance from obstructions not on roof	App E 4(a)	Appendix B	
76.	Distance from trees	App E 5	Appendix B	
77.	Distance to furnace or incinerator flue	App E 3(b)	Appendix B	
78.	Unrestricted airflow	App E, 4(a) and 4(b)	Appendix B	
79.	Probe material (NO <sub>x</sub> , SO <sub>2</sub> , O <sub>3</sub> )	App E 9	Appendix B	
80.	Residence time (NO <sub>x</sub> , SO <sub>2</sub> , O <sub>3</sub> )	App E 9	Appendix B	

This page intentionally left blank

## Appendix B Detailed Station Information

This appendix presents detailed site information the reporting of which is required by federal regulation. In addition to measuring ambient levels of gaseous and particulate (solid and liquid aerosol) air pollutants listed in Tables 10 – 15, stations in Ventura County also collect meteorological data as included in Table 1.

**Table 10 – El Rio Station Information**

Local Site Name >		El Rio – Rio Mesa School #2	
AQS ID	061113001		
Global Positioning System (GPS) coordinates	34.25238, -119.14318		
Street address	545 Central Ave, Oxnard CA 93030		
County	Ventura County		
Distance to roadways	101 meters		
Traffic count	5,000 vehicles/day, 2013		
Groundcover	Paved/Asphalt		
Representative statistical area name	Oxnard-Thousand Oaks-Ventura Metro Area		
Pollutant, POC >	Ozone, 1	NO <sub>2</sub> , 1	VOCs, 1
Parameter code	44201	42602	NA
Basic monitoring objective	NAAQS	NAAQS	Research
Site type	Population Exposure	Population Exposure	Maximum Precursor Emissions Impact
Monitor type	SLAMS, PAMS	PAMS	PAMS
Instrument manufacturer and model	API Model 400	API Model 200	Agilent 6890,5973 MS, Entech 7100 pre-concentrator with auto sampling tree
Method code	087	082	123
Primary monitor	Yes	Yes	Yes
FRM/FEM/ARM/other	FRM	FRM	Other
Collecting agency	VCAPCD	VCAPCD	VCAPCD/AAC
Analytical lab	NA	NA	AAC
Reporting agency	VCAPCD	VCAPCD	VCAPCD/AAC

Table 10 – El Rio Station Information (cont'd)

Pollutant, POC >	Ozone, 1	NO <sub>2</sub> , 1	VOCs, 1
Spatial scale	Urban	Urban	Neighborhood
Monitoring start date	01/01/1979	01/01/1980	06/01/1994
Current sampling frequency	Continuous	Continuous	1-in-3 days and days in which ozone is predicted to exceed .075 ppm
Calculated sampling frequency	Continuous	Continuous	Same as above
Sampling season	Year-round	Year-round	July 1 through September 30
Probe height	4.3 meters	4.3 meters	4.3 meters
Distance from supporting structure	1.2 meters	1.2 meters	1.2 meters
Distance from obstructions on roof	None	None	None
Distance from obstructions not on roof	None	None	None
Distance from trees	25 meters	25 meters	29 meters
Distance to furnace or incinerator flue	NA	NA	NA
Distance between collocated monitors	NA	NA	NA
Unrestricted airflow	360 degrees	360 degrees	360 degrees
Probe material for reactive gases	Borosilicate glass & FEP Teflon	Borosilicate glass & FEP Teflon	Borosilicate glass & FEP Teflon
Residence time for reactive gases	7.5 seconds	8.8 seconds	NA
Will there be changes within the next 18 months?	No	No	Maybe, awaiting EPA decision
Is it suitable for comparison against the annual PM <sub>2.5</sub> NAAQS?	NA	NA	NA
Frequency of flow rate verification for manual PM samplers	NA	NA	NA
Frequency of flow rate verification for automated PM analyzers	NA	NA	NA
Frequency of one-point QC check for gaseous instruments	Every other day	Every other day	2x/smog season, June & October
Last Annual Performance Evaluation for gaseous parameters	04/30/2013 05/01/2014	04/30/2013 05/01/2014	2011
Last two semi-annual flow rate audits for PM monitors	NA	NA	NA

Table 10 – El Rio Station Information (cont'd)

Pollutant, POC >	PM <sub>2.5</sub> FEM, 3	PM <sub>10</sub> FEM, 3
Parameter code	88101	81102
Basic monitoring objective	NAAQS	NAAQS
Site type	Population Exposure	Population exposure
Monitor type	SLAMS	SLAMS
Instrument manufacturer and model	Met One BAM 1020	Met One BAM 1020
Method code	170	122
Primary monitor	Yes	Yes
FRM/FEM/ARM/other	FEM	FEM
Collecting agency	VCAPCD	VCAPCD
Analytical lab	NA	NA
Reporting agency	VCAPCD	VCAPCD
Spatial scale	Neighborhood	Neighborhood
Monitoring start date	01/26/2012	07/22/2012
Current sampling frequency	Continuous	Continuous
Calculated sampling frequency	NA	NA
Sampling season	Year-round	Year-round
Probe height	4.6 meters	4.5 meters
Distance from supporting structure	1.7 meters	1.6 meters
Distance from obstructions on roof	None	None
Distance from obstructions not on roof	None	None
Distance from trees	29 meters	29 meters
Distance to furnace or incinerator flue	NA	NA
Distance between collocated monitors	NA	NA
Unrestricted airflow	360 degrees	360 degrees
Probe material for reactive gases	NA	NA
Residence time for reactive gases	NA	NA
Will there be changes within the next 18 months?	No	No
Is it suitable for comparison against the annual PM <sub>2.5</sub> NAAQS?	Yes	NA

Table 10 – El Rio Station Information (cont'd)

Pollutant, POC >	PM <sub>2.5</sub> FEM, 3	PM <sub>10</sub> FEM, 3
Frequency of flow rate verification for manual PM samplers	NA	NA
Frequency of flow rate verification for automated PM analyzers	2x/month flow and leak check	2x/month flow and leak check
Frequency of one-point QC check for gaseous instruments	NA	NA
Last Annual Performance Evaluation for gaseous parameters	NA	NA
Last two semi-annual flow rate audits for PM monitors	05/01/2014 04/30/2013 11/05/2013	05/01/2014 04/30/2013 11/05/2013

Table 11 – Ojai Station Information

Local Site Name >		Ojai - Ojai Avenue	
AQS ID		061111004	
GPS coordinates		34.44804,-119.23131	
Street address		1201 Ojai Ave., Ojai CA 93023	
County		Ventura County	
Distance to roadways		65 meters	
Traffic count		7,300 vehicles/day, 2011	
Groundcover		Paved	
Representative statistical area name		Oxnard-Thousand Oaks-Ventura Metro Area	
Pollutant, POC >		Ozone, 1	PM <sub>2.5</sub> FEM, 3
Parameter code		44201	88101
Basic monitoring objective		NAAQS	NAAQS
Site type		Population exposure	Population exposure
Monitor type		SLAMS	SLAMS
Instrument manufacturer and model		API Model 400	Met One BAM 1020
Method code		087	170
Primary monitor		Yes	Yes
FRM/FEM/ARM/other		FRM	FEM
Collecting agency		VCAPCD	VCAPCD
Analytical lab		NA	NA
Reporting agency		VCAPCD	VCAPCD
Spatial scale		Urban	Neighborhood
Monitoring start date		04/01/1996	11/29/2011
Current sampling frequency		Continuous	Continuous
Calculated sampling frequency		Continuous	Continuous
Sampling season		Year-round	Year-round
Probe height		4.0 meters	4.6 meters
Distance from supporting structure		1.5 meters	1.5 meters
Distance from Obstructions on roof		None	None
Distance from obstructions not on roof		None	None

Table 11 – Ojai Station Information (cont'd)

Pollutant, POC >	Ozone, 1	PM <sub>2.5</sub> FEM, 3
Distance from trees	35 meters	33 meters
Distance to furnace or incinerator flue	NA	NA
Distance between collocated monitors	NA	NA
Unrestricted airflow	360 degrees	360 degrees
Probe material for reactive gases	Borosilicate glass & FEP Teflon	NA
Residence time for reactive gases	8.5 seconds	NA
Will there be changes within the next 18 months?	No	No
Is it suitable for comparison against the annual PM <sub>2.5</sub> NAAQS?	NA	Yes
Frequency of flow rate verification for manual PM samplers	NA	NA
Frequency of flow rate verification for automated PM analyzers	NA	2x/month flow and leak check
Frequency of one-point QC check for gaseous instruments	Every other day	NA
Last Annual Performance Evaluation for gaseous parameters	05/02/2013 04/29/2014	NA
Last two semi-annual flow rate audits for PM monitors	NA	05/02/2013 11/06/2013 04/29/2014



Table 12 – Piru Station Information

Local Site Name >		Piru – Pacific Avenue	
AQS ID		061110009	
GPS coordinates		34.40426, -118.80991	
Street address		3301 Pacific Ave., Piru CA 93040	
County		Ventura County	
Distance to roadways		382 meters	
Traffic count		23,000 vehicles/day, 2011	
Groundcover		Gravel	
Representative statistical area name		Oxnard-Thousand Oaks-Ventura Metro Area	
Pollutant, POC >		Ozone, 1	PM <sub>2.5</sub> FEM, 3
Parameter code		44201	88101
Basic monitoring objective		NAAQS	NAAQS
Site type		Population exposure	Population exposure
Monitor type		SLAMS	SLAMS
Instrument manufacturer and model		API Model 400	Met One BAM 1020
Method code		087	170
Primary monitor		Yes	Yes
FRM/FEM/ARM/other		FRM	FEM
Collecting agency		VCAPCD	VCAPCD
Analytical lab		NA	NA
Reporting agency		VCAPCD	VCAPCD
Spatial scale		Urban	Neighborhood
Monitoring start date		11/03/2000	11/15/2011
Current sampling frequency		Continuous	Continuous
Calculated sampling frequency		Continuous	Continuous
Sampling season		Year-round	Year-round
Probe height		3.5 meters	4.6 meters
Distance from supporting structure		1.0 meters	2.0 meters
Distance from obstructions on roof		None	None
Distance from obstructions not on roof		None	None

Table 12 – Piru Station Information (cont'd)

Pollutant, POC >	Ozone, 1	PM <sub>2.5</sub> FEM, 3
Distance from trees	30 meters	29 meters
Distance to furnace or incinerator flue	NA	NA
Distance between collocated monitors	NA	NA
Unrestricted airflow	360 degrees	360 degrees
Probe material for reactive gases	Borosilicate glass & FEP Teflon	NA
Residence time for reactive gases	9.9 seconds	NA
Will there be changes within the next 18 months?	No	No
Is it suitable for comparison against the annual PM <sub>2.5</sub> NAAQS?	NA	Yes
Frequency of flow rate verification for manual PM samplers	NA	NA
Frequency of flow rate verification for automated PM analyzers	NA	2x/month flow and leak check
Frequency of one-point QC check for gaseous instruments	Every other day	NA
Last Annual Performance Evaluation for gaseous parameters	05/20/2013 05/19/2014	NA
Last two semi-annual flow rate audits for PM monitors	NA	05/20/2013 11/05/2013 05/19/2014

Table 13 – Simi Valley Station Information

Local Site Name >		Simi Valley – Cochran Street	
AQS ID		061112002	
GPS coordinates		34.27640, -118.68375	
Street address		5400 Cochran St., Simi Valley CA 93063	
County		Ventura County	
Distance to roadways		278 meters	
Traffic count		10,200 vehicles/day, 2013	
Groundcover		Asphalt	
Representative statistical area name		Oxnard-Thousand Oaks-Ventura Metro Area	
Pollutant, POC >	Ozone,1	NO <sub>2</sub> , 1	VOCs, 1
Parameter code	44201	42602	NA
Basic monitoring objective	NAAQS	NAAQS	Research
Site type	Highest concentration	Highest concentration	Maximum Precursor Emissions Impact
Monitor type	SLAMS, PAMS	PAMS	PAMS
Instrument manufacturer and model	API Model 400	API Model 200	Varian 3800
Method code	087	082	123
Primary monitor	Yes	Yes	Yes
FRM/FEM/ARM/other	FRM	FRM	Other
Collecting agency	VCAPCD	VCAPCD	VCAPCD/AAC
Analytical lab	NA	NA	AAC
Reporting agency	VCAPCD	VCAPCD	VCAPCD/AAC
Spatial scale	Urban	Urban	Urban
Monitoring start date	06/01/1985	06/01/1985	06/01/1994
Current sampling frequency	Continuous	Continuous	1-in-3 days and days in which ozone is predicted to exceed .075 ppm
Calculated sampling frequency	Continuous	Continuous	Same as above
Sampling season	Year-round	Year-round	July 1 through September 30
Probe height	3.5 meters	3.5 meters	5.0 meters

Table 13 – Simi Valley Station Information (cont'd)

Pollutant, POC >	Ozone,1	NO <sub>2</sub> , 1	VOCs, 1
Distance from supporting structure	1.0 meters	1.0 meters	1.5 meters
Distance from obstructions on roof	None	None	None
Distance from obstructions not on roof	None	None	None
Distance from trees	49 meters	49 meters	47 meters
Distance to furnace or incinerator flue	NA	NA	NA
Distance between collocated monitors	NA	NA	NA
Unrestricted airflow	360 degrees	360 degrees	360 degrees
Probe material for reactive gases	Borosilicate glass & FEP Teflon	Borosilicate glass & FEP Teflon	Borosilicate glass & FEP Teflon
Residence time for reactive gases	10.2 seconds	9.3 seconds	NA
Will there be changes within the next 18 months?	No	No	No
Is it suitable for comparison against the annual PM <sub>2.5</sub> NAAQS?	NA	NA	NA
Frequency of flow rate verification for manual PM samplers	NA	NA	NA
Frequency of flow rate verification for automated PM analyzers	NA	NA	NA
Frequency of one-point QC check for gaseous instruments	Every other day	Every other day	2x/smog season June & October
Last Annual Performance Evaluation for gaseous parameters	05/09/2013 05/08/2014	05/09/2013 05/08/2014	2011
Last two semi-annual flow rate audits for PM monitors	NA	NA	NA

Table 13 – Simi Valley Station Information (cont'd)

Pollutant, POC >	PM <sub>2.5</sub> FEM, 3	PM <sub>2.5</sub> FEM, 4 Collocated	PM <sub>10</sub> FEM, 3
Parameter code	88101	88101	81102
Basic monitoring objective	Public Information	Public Information	NAAQS
Site type	Highest concentration	Highest concentration	Highest Concentration
Monitor type	SLAMS	SLAMS	SLAMS
Instrument manufacturer and model	Met One BAM 1020	Met One BAM 1020	Met One BAM 1020
Method code	170	170	122
Primary monitor	Yes	No	Yes
FRM/FEM/ARM/other	FEM	FEM	FEM
Collecting agency	VCAPCD	VCAPCD	VCAPCD
Analytical lab	NA	NA	NA
Reporting agency	VCAPCD	VCAPCD	VCAPCD
Spatial scale	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	06/29/2013	03/17/2014	06/19/2012
Current sampling frequency	Continuous	Continuous	Continuous
Calculated sampling frequency	Continuous	Continuous	Continuous
Sampling season	Year-round	Year-round	Year-round
Probe height	4.6 meters	4.9 meters	4.5 meters
Distance from supporting structure	2.3 meters	2.4 meters	2.2 meters
Distance from obstructions on roof	None	None	None
Distance from obstructions not on roof	None	None	None
Distance from trees	49 meters	48 meters	48 meters
Distance to furnace or incinerator flue	NA	NA	NA
Distance between collocated monitors	NA	1.8 meters	NA
Unrestricted airflow	360 degrees	360 degrees	360 degrees
Probe material for reactive gases	NA	NA	NA
Residence time for reactive gases	NA	NA	NA
Will there be changes within the next 18 months?	No	No	No
Is it suitable for comparison against the annual PM <sub>2.5</sub> NAAQS?	Yes	Yes	NA

Table 13 – Simi Valley Station Information (cont'd)

Pollutant, POC >	PM <sub>2.5</sub> FEM, 3	PM <sub>2.5</sub> FEM, 4 Collocated	PM <sub>10</sub> FEM, 3
Frequency of flow rate verification for manual PM samplers	NA	NA	NA
Frequency of flow rate verification for automated PM analyzers	2x/month flow and leak check	2x/month flow and leak check	2x/month flow and leak check
Frequency of one-point QC check for gaseous instruments	NA	NA	NA
Last Annual Performance Evaluation for gaseous parameters	NA	NA	NA
Last two semi-annual flow rate audits for PM monitors	05/09/2013 11/05/2013 05/08/2014	05/08/2014	05/09/2013 11/05/2013 05/08/2014

Table 14 – Thousand Oaks Station Information

Local Site Name >		Thousand Oaks – Moorpark Road	
AQS ID		061110007	
GPS coordinates		34.21014, -118.87050	
Street address		2323 Moorpark Rd., Thousand Oaks CA 91360	
County		Ventura County	
Distance to roadways		193 meters	
Traffic count		17,700 vehicles/day, 2011	
Groundcover		Asphalt	
Representative statistical area name		Oxnard-Thousand Oaks-Ventura Metro Area	
Pollutant, POC >		Ozone, 1	PM <sub>2.5</sub> FEM, 3
Parameter code		44201	88101
Basic monitoring objective		NAAQS	NAAQS
Site type		Population Exposure	Population Exposure
Monitor type		SLAMS	SLAMS
Instrument manufacturer and model		API Model 400	Met One BAM 1020
Method code		087	170
Primary monitor		Yes	No
FRM/FEM/ARM/other		FRM	FEM
Collecting agency		VCAPCD	VCAPCD
Analytical lab		NA	NA
Reporting agency		VCAPCD	VCAPCD
Spatial scale		Urban	Neighborhood
Monitoring start date		03/01/1992	01/07/2012
Current sampling frequency		Continuous	Continuous
Calculated sampling frequency		Continuous	Continuous
Sampling season		Year-round	Year-round
Probe height		3.7 meters	4.6 meters
Distance from supporting structure		1.1 meters	2.0 meters
Distance from obstructions on roof		None	None
Distance from obstructions not on roof		None	None

Table 14 – Thousand Oaks Station Information (cont'd)

Pollutant, POC >	Ozone, 1	PM <sub>2.5</sub> FEM, 3
Distance from trees	87 meters	87 meters
Distance to furnace or incinerator flue	NA	NA
Distance between collocated monitors	NA	NA
Unrestricted airflow	360 degrees	360 degrees
Probe material for reactive gases	Borosilicate glass & FEP Teflon	NA
Residence time for reactive gases	13.1 seconds	NA
Will there be changes within the next 18 months?	No	No
Is it suitable for comparison against the annual PM <sub>2.5</sub> NAAQS?	NA	Yes
Frequency of flow rate verification for manual PM samplers	NA	NA
Frequency of flow rate verification for automated PM analyzers	NA	2x/month flow and leak check
Frequency of one-point QC check for gaseous instruments	Every other day	NA
Last Annual Performance Evaluation for gaseous parameters	05/01/2013 04/30/2014	NA
Last two semi-annual flow rate audits for PM monitors	NA	05/01/2013 11/05/2013 04/30/2014



Table 15 – Simi Valley – Upper Air Station Information

Local Site Name >		Simi Valley – Upper Air					
AQS ID		061110008					
GPS Coordinates		34.29124, -118.79761					
Street Address		2801 Madera Rd., Simi Valley CA 93063					
County		Ventura County					
Distance to roadways		443 meters					
Traffic count		94,000 vehicles/day, 2011					
Groundcover		Gravel					
Representative statistical area name		Oxnard-Thousand Oaks-Ventura Metro Area					
Last Annual Performance Evaluation		05/01/2013					
		04/30/2014					
Wind Speed	Wind direction	Temperature	Relative Humidity	Total solar Radiation	Rainfall	Ultraviolet Radiation	Barometric Pressure
●	●	●	●	●	✓	●	●

✓ Monitored as part of SLAMS network.

● Monitored as part of SLAMS and PAMS networks.

This page intentionally left blank

## Appendix C Minimum Monitoring Requirements

40 CFR 58.10, Appendix D specifies the minimum requirements for air monitoring networks. As shown in Tables 16 through 25, the VCAPCD air monitoring network meets or exceeds the minimum monitoring requirements for all criteria pollutants.

Certain monitoring requirements in 40 CFR 58 are based upon Metropolitan Statistical Areas (MSAs). MSAs are part of a population, economic and social-based classification of geographical regions developed by the U.S. Census Bureau. An MSA may include one or more counties. However, not all counties are within an MSA. The VCAPCD contains a single MSA, the Oxnard-Thousand Oaks-Ventura MSA. A CBSA is a collective term for MSAs and micropolitan areas, so since there is only one MSA in Ventura County, the MSA and CBSA are the same.

### Ozone

**Table 16 – Minimum Monitoring Requirements for Ozone**

MSA	County	Population (Census Year)	8-Hour Design Value (Years)	Design Value Site (AQS ID)	# Required Monitors	# Active Monitors	# Add'l Monitors Needed
Oxnard-Thousand Oaks-Ventura	Ventura County	823,318 (2010)	79 ppb (2011-2013)	Simi Valley (061112002)	2	5	0

Monitors required for SIP or Maintenance Plan: 2

## PM<sub>2.5</sub>

With regard to 40 CFR 58.10(c), "...review of changes to a PM<sub>2.5</sub> monitoring network that impact the location of a violating PM<sub>2.5</sub> monitor." Should such a violation occur, VCAPCD would review the possible causes for the violation (weather, geography, changes to the local area). Prior to making any changes to the PM<sub>2.5</sub> monitoring network to address such a violation, VCAPCD would consult EPA and CARB regarding possible methodologies to better monitor PM<sub>2.5</sub> and better define the issue. Any changes to the monitoring network related to a violating monitor that would change PM<sub>2.5</sub> monitoring would be through a process of public comment on the plan via the public notification process.

**Table 17 – Minimum Monitoring Requirements for PM<sub>2.5</sub> SLAMS**

MSA	County	Population (Census Year)	Annual Design Value (Years)	Annual Design Value Site (AQS ID)	Daily Design Value (Years)	Daily Design Value Site (AQS ID)	# Required SLAMS Monitors	# Active SLAMS Monitors	# Add'l SLAMS Monitors Needed
Oxnard-Thousand Oaks-Ventura	Ventura County	823,318 (2010)	9.1 µg/m <sup>3</sup> (2011-2013)	Thousand Oaks (061110007) Simi Valley (061112002)	20 µg/m <sup>3</sup> (2011-2013)	Thousand Oaks (061110007) Simi Valley (061112002)	1	6	0

**Table 18 – Minimum Monitoring Requirements for Continuous PM<sub>2.5</sub> Monitors**

MSA	County	Population (Census Year)	Annual Design Value (Years)	Annual Design Value Site (AQS ID)	Daily Design Value (Years)	Daily Design Value Site (AQS ID)	# Required Continuous Monitors	# Active Continuous Monitors	# Add'l Continuous Monitors Needed
Oxnard-Thousand Oaks-Ventura	Ventura County	823,318 (2010)	9.1 µg/m <sup>3</sup> (2011-2013)	Thousand Oaks (061110007) Simi Valley (061112002)	20 µg/m <sup>3</sup> (2011-2013)	Thousand Oaks (061110007) Simi Valley (061112002)	1	6	0

Monitors required for SIP or Maintenance Plan: None.

## PM<sub>10</sub>

PM<sub>10-2.5</sub> monitoring is required only at NCore stations. There is no requirement for an NCore station in Ventura County.

**Table 19 – Minimum Monitoring Requirements for PM<sub>10</sub>**

MSA	County	Population (Census Year)	Max Concentration (24-hr avg)	Max Concentration Site	# Required Monitors	# Active Monitors	# Add'l Monitors Needed
Oxnard-Thousand Oaks-Ventura	Ventura County	823,318 (2010)	185.1 µg/m <sup>3</sup> *	El Rio (061113001)	1 - 2	2	0

Monitors required for SIP or Maintenance Plan: None.

\* VCAPCD staff has flagged this data for exclusion as exceptional event data.

**Table 20 – Minimum Monitoring Requirements for PM<sub>10-2.5</sub>**

MSA	County	Population (Census Year)	Max Concentration	Max Concentration Site	# Required Monitors	# Active Monitors	# Add'l Monitors Needed
Oxnard-Thousand Oaks-Ventura	Ventura County	823,318 (2010)	NA	NA	0	0	0

Monitors required for SIP or Maintenance Plan: None.

## NO<sub>2</sub>

The VCAPCD previously operated monitors to measure levels of nitrogen dioxide (NO<sub>2</sub>) at the Ojai, Ventura, and Thousand Oaks monitoring stations. Because of the low levels recorded, NO<sub>2</sub> monitoring at these stations was discontinued in July 2004. The VCAPCD currently monitors for NO<sub>2</sub> at El Rio and Simi Valley monitoring stations as part of PAMS. There are no NO<sub>2</sub> monitors required in Ventura County for RA-40 monitoring. There are no NO<sub>2</sub> monitors required for SIP or maintenance planning.

In 2010, EPA adopted a new NAAQS for nitrogen dioxide (NO<sub>2</sub>). Per 40 CFR 58.10(a)(5)(v), one Near-Road monitor NO<sub>2</sub> monitor will be required for Ventura County. When NO<sub>2</sub> Near-Road requirements are defined by EPA, VCAPCD expects to establish the ambient NO<sub>2</sub> Near-Road monitoring site along U.S. Highway 101 (the Ventura Freeway), in Thousand Oaks between Hampshire Road and Westlake Village Road. The Near-Road NO<sub>2</sub> monitor must be operational by January 1, 2017. Discussion of the future Near-Road NO<sub>2</sub> monitoring site is included in Section 3.2.2.

Table 21 – Minimum Monitoring Requirements for NO<sub>2</sub>

CBSA	Population (Census Year)	Max AADT Counts (Year)	# Required Near-Road Monitors	# Active Near-Road Monitors	# Add'l Near-Road Monitors Needed	# Required Area-wide Monitors	# Active Area-wide Monitors	# Add'l Area-wide Monitors Needed
Oxnard-Thousand Oaks-Ventura	823,318 (2010)	189,000 (2011)	0	0	0	0*	2	0

\* Review of minimum monitoring requirements indicates that there is no requirement for area-wide NO<sub>2</sub> monitoring in Ventura County. Corrections were made in AQS to change monitor type to PAMS in June 2013 for the El Rio and Simi Valley NO<sub>2</sub> monitors.

Monitors required for SIP or Maintenance Plan: None

Monitors required for PAMS: 2

EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.3.4: None.

### **Sulfur Dioxide (SO<sub>2</sub>)**

The VCAPCD previously operated a monitor to measure SO<sub>2</sub> at the El Rio monitoring station. Because of the low levels recorded, SO<sub>2</sub> monitoring was discontinued in July 2004.

On June 2, 2010, EPA established a new 1-hour SO<sub>2</sub> NAAQS, effective August 23, 2010, which is based on the same 3-year average of the annual 99<sup>th</sup> percentile of 1-hour daily maximum averages in ppb (level: 75). MSA's with a population-weighted emission index greater than a threshold would be required to establish an ambient SO<sub>2</sub> monitoring program by January 1, 2013. On May 27, 2011, EPA Region 9 issued an email from Meredith Kurpius, PhD, Air Division, stating that "EPA did not expect Ventura County to have any additional SO<sub>2</sub> monitoring requirements based on the 2008 NEI." Therefore, based on the 2008 National Emissions Inventory (NEI), Ventura County fell below the population-weighted emission index threshold, releasing the VCAPCD from the need to monitor SO<sub>2</sub>. There are no SO<sub>2</sub> monitors required for SIP or maintenance planning.

Table 22 – Minimum Monitoring Requirements for SO<sub>2</sub>

CBSA	County	Population (Census Year)	Total SO <sub>2</sub>	Population-Weighted Emissions Index	# Required Monitors	# Active Monitors	# Add'l Monitors Needed
Oxnard-Thousand Oaks-Ventura	Ventura County	823,318 (2010)	NA	NA	0	0	0

Monitors required for SIP or Maintenance Plan: None.

EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.4.3: None.

## CO

The VCAPCD previously operated monitors to measure levels of CO at the El Rio and Simi Valley monitoring stations. Because of the low levels recorded, CO monitoring at these stations was discontinued in March and July 2004.

40 CFR 58, Appendix D, Section 4.2.1 states that CBSAs having a population of 1,000,000 or more persons are required to have one CO monitor collocated with a Near-Road NO<sub>2</sub> monitor, as required by 40 CFR 58, Appendix D, Section 4.3.2. Because the population of the Oxnard-Thousand Oaks-Ventura CBSA is less than 1,000,000 persons, there is no requirement for a Near-Road CO monitor in Ventura County.

Table 23 – Minimum Monitoring Requirements for CO

CBSA	County	Population (Census Year)	# Required Near-Road Monitors	# Active Near-Road Monitors	# Add'l Monitors Needed
Oxnard-Thousand Oaks-Ventura	Ventura County	823,318 (2010)	0	0	0

Monitors required for SIP or Maintenance Plan: None.

EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.2.2: None.

## NCore

The NCore Network is a multi-pollutant air monitoring network across the United States that integrates several advanced measurement systems for particles, pollutant gases and meteorology. Most NCore stations have been operating since the formal start of the network on January 1, 2011. NCore sites are required under 40 CFR Part 58.10(a)(3), and are generally sited in large metropolitan areas at a rate of one site per state. There is no requirement for an NCore site in Ventura County.

## Lead (Pb)

In 2008, EPA revised the NAAQS for lead from  $1.5 \mu\text{g}/\text{m}^3$  to  $0.15 \mu\text{g}/\text{m}^3$ . The regulation requires that state and local agencies establish an ambient lead monitor by January 1, 2011. In December 2009, EPA proposed revisions to the regulation that revise “source oriented” monitoring requirements. As a result of EPA’s revisions, and EPA’s recent acceptance of the VCAPCD’s lead emission inventory for airports, the VCAPCD will not be subject to the lead monitoring requirements.

Table 24 – Minimum Monitoring Requirements for Pb at NCore

NCore Site	CBSA	Population (Census Year)	# Required Monitors	# Active Monitors	# Add'l Monitors Needed
NA	Oxnard-Thousand Oaks-Ventura	823,318 (2010)	0	0	0

Table 25 – Source Oriented Lead Monitoring (Including Airports)

Source Name	Address	Pb Emissions (tons per year)	Emission Inventory Source	Max 3-Month Design Value	Design Value Date	# Required Monitors	# Active Monitors	# Add'l Monitors Needed
NA	NA	NA	NA	NA	NA	0	0	0

Monitors required for SIP or Maintenance Plan: None.

EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.5(c): None.



**Appendix D Ambient Air Quality Standards**

Table 26 – Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards
<b>Ozone (O<sub>3</sub>)</b>	8 Hour	0.070 ppm	0.075 ppm
	1 Hour	0.09 ppm	—
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>	24 Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>	24 Hour	—	35 µg/m <sup>3</sup>
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>
<b>Carbon Monoxide (CO)</b>	8 Hour	9.0 ppm	9 ppm
	1 Hour	20 ppm	35 ppm
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>	1 Hour	0.18 ppm	100 ppb
	Annual Arithmetic Mean	0.030 ppm	0.053 ppm
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>	1 Hour	0.25 ppm	75 ppb
	3 Hour	—	0.5 ppm (secondary)
	24 Hour	0.04 ppm	0.14 ppm (primary, certain areas)
	Annual Arithmetic Mean	—	0.030 ppm (primary, certain areas)
<b>Lead</b>	30 Day Average	1.5 µg/m <sup>3</sup>	—
	Calendar Quarter	—	1.5 µg/m <sup>3</sup> (certain areas)
	Rolling 3-Month Average	—	0.15 µg/m <sup>3</sup>
<b>Visibility Reducing Particles</b>	8 Hour	Sufficient amount to reduce the prevailing visibility to less than ten miles when the relative humidity is less than 70%	—
<b>Sulfates</b>	24 Hour	25 µg/m <sup>3</sup>	—
<b>Hydrogen Sulfide (H<sub>2</sub>S)</b>	1 Hour	0.03 ppm	—
<b>Vinyl Chloride</b>	24 hour	0.01 ppm	—

As of February 5, 2014.

This page intentionally left blank

## Appendix E Collocation Requirements

40 CFR 58, Appendix A, Section 3 includes collocation requirements for PM<sub>2.5</sub>, continuous PM<sub>2.5</sub>, PM<sub>10</sub>, and Pb monitoring networks. The requirements apply at the PQAQ level. A PQAQ is a monitoring organization or a coordinated aggregation of such organizations that is responsible for a set of stations that monitors the same pollutant and for which data quality assessments can logically be pooled. Ventura County is in the CARB PQAQ.

### Continuous PM<sub>2.5</sub>

There are six Met One BAM 1020 continuous PM<sub>2.5</sub> FEM samplers (method code 170) in Ventura County, one at each of the El Rio, Ojai, Piru, Thousand Oaks stations, and two at the Simi Valley station. Each sampler is designated as a primary monitor, except at the Simi Valley station, where one is designated as a primary and one as a collocated sampler.

As stated above, collocation requirements apply at the PQAQ level. Prior to making any changes to our PM<sub>2.5</sub> network, we will consult with CARB (our PQAQ) and EPA Region 9. The collocated PM<sub>2.5</sub> FEM sampler at Simi Valley was added to our monitoring network on March 17, 2014 at the request of CARB in an effort to meet collocation requirements at the PQAQ level.

According to CARB's 2013 Annual Monitoring Network Report for Twenty-three Districts in California, for method 170, at the time of writing, the PQAQ met the collocation requirements for FEM/FRM sites, and needed one site to meet the collocation requirements for FEM/FEM sites. At the request of CARB, VCAPCD added a collocated PM<sub>2.5</sub> FEM monitor to the Simi Valley site on April 1, 2014.

Method Code	# Primary Monitors	# Required Collocated Monitors	# Active Collocated Monitors
170 (FEM)	5	1	1

### PM<sub>10</sub>

There are two Met One BAM 1020 continuous PM<sub>10</sub> samplers (method code 122) in Ventura County. Both of these samplers are designated as primary monitors, one at the El Rio station and one at the Simi Valley station. Collocation requirements apply at the PQAQ level. The CARB 2013 Annual Monitoring Network Report for Twenty-three Districts in California indicates that the CARB PQAQ, which is the PQAQ for Ventura County, was initiating a phased approach to meeting PM<sub>10</sub> collocation requirements. The first step was to replace FRM monitors with FEM monitors. VCAPCD replaced our existing PM<sub>10</sub> FRM monitors with PM<sub>10</sub> FEM monitors following CARB annual performance audits at the end of

April and beginning of May 2014. The transition occurred after side-by side comparison of FEM and FRM data, and after consultation with and concurrence from CARB, our PQAO. There are no collocation requirements for continuous PM<sub>10</sub> monitors.

Method Code	# Primary Monitors	# Required Collocated Monitors	# Active Collocated Monitors
122 (FEM)	2	0	0

### **Non-NCore Pb**

There is no source or non-source Pb monitoring required in Ventura County, and there are no NCore sites in Ventura County. Therefore, there are no collocated monitors in Ventura County.

Method Code	# Primary Monitors	# Required Collocated Monitors	# Active Collocated Monitors
NA	0	0	0

## Appendix F Air Monitoring Network Related Correspondence

This appendix contains correspondence about matters related to the ambient air monitoring network in Ventura County. Table 27 summarizes the documentation in this appendix.

**Table 27 – VCAPCD Air Monitoring Network Correspondence**

Date	Author	Recipient	Subject
01/11/13	Katherine Hoag, EPA, Region	Kent Field, VCAPCD	FY13 PM <sub>2.5</sub> 103 grants – one-time funding requests, updates to network and FY12 funding
01/24/13	Kent Field, VCAPCD	Katherine Hoag, EPA, Region 9	FY13 PM <sub>2.5</sub> 103 grants – one-time funding requests, updates to network and FY12 funding (request to replace PM <sub>2.5</sub> non-FEM sampler with PM <sub>2.5</sub> FEM sampler
06/20/13	Kent Field, VCAPCD	Meredith Kurpius, EPA, Region 9	Request to discontinue continuous hydrocarbon sampling at Simi Valley due to equipment failure and Ventura County's future within the PAMS network
12/17/13	Meredith Kurpius, EPA, Region 9	Kent Field, VCAPCD	2013 Ambient Air Monitoring Network Plan review, (including approval of discontinuation of Simi Valley continuous hydrocarbon sampling_
12/18/13	Kent Field, VCAPCD	Meredith Kurpius, EPA, Region 9	Request to discontinue CSN Simi Valley sampling
03/18/14	Kent Field, VCAPCD	Michael Miguel, CARB	Results of Ventura County Air Pollution Control District FRM vs. FEM Comparability Assessment for PM <sub>2.5</sub> and PM <sub>10</sub> Particulate Monitoring
03/26/14	Richard Wayland, EPA, Air Quality Assessment Division	Kent Field, VCAPCD	Approval to discontinue CSN Simi Valley sampling
03/27/14	Michael Miguel, CARB	Michael Villegas, VCAPCD	CARB concurrence with VCAPCD on good PM <sub>2.5</sub> and PM <sub>10</sub> FRM/FEM data agreement, and CARB support to transition to PM <sub>2.5</sub> and PM <sub>10</sub> FEM exclusively.
04/30/14	Michael Villegas, VCAPCD	Fletcher Clover, EPA, Region 9	2013 Annual Air Monitoring Data Certification

**From:** [Hoag.Katherine@epamail.epa.gov](mailto:Hoag.Katherine@epamail.epa.gov) [<mailto:Hoag.Katherine@epamail.epa.gov>]  
**Sent:** Friday, January 11, 2013 12:10 PM  
**To:**  
**Subject:** FY13 PM2.5 103 grants - one-time funding requests, updates to network and FY12 funding

Hello all -

Happy New Year! It's that time again! I'm working on the draft allocation spreadsheets for the FY13 PM2.5 103 grants. Please send the following information by January 25:

1. If you received one-time funding last year for equipment replacement, please let me know how that funding was spent so I can keep track.
2. Let me know about any changes to your network (e.g. new sites, site/monitor closures, monitor replacement, sampling frequency changes, etc.) to your PM2.5 network as it was funded last year.
3. Let me know if you have any requests for one-time funding for equipment replacement or other PM2.5 programmatic needs.

Thanks very much for your help!

Kate

---

Katherine Hoag, Ph.D.  
 U.S. EPA, Region 9  
 Air Quality Analysis Office (AIR-7)  
 75 Hawthorne Street  
 San Francisco, CA 94105  
[Hoag.Katherine@epa.gov](mailto:Hoag.Katherine@epa.gov)  
 (415) 972-3970

**From:** Kent Field  
**Sent:** Thursday, January 24, 2013 4:36 PM  
**To:** [Hoag.Katherine@epamail.epa.gov](mailto:Hoag.Katherine@epamail.epa.gov)  
**Cc:** Phil Moyal; Andrew Brown; Jim McElroy; Mallory Ham  
**Subject:** RE: FY13 PM2.5 103 grants - one-time funding requests, updates to network and FY12 funding

Kate,

I have some changes from last year. For April 2013-March 2014

El Rio (06-111-3001) Partisol – 2025 is a 1in6 and will require 73 filters.

Our contract sites,  
 Bakersfield- SE, Partisol, 06-029-0016, 146 filters  
 Corcoran, Partisol, 06-031-004, 116 filters  
 Fresno Pacific, Partisol, 06-019-5025, 116 filters  
 Merced, Partisol, 06-047-2510, 116 filters

Add these contract sites:  
 Clovis (06-019-5001), Partisol, 1in3 and 1in6, 116 filters  
 Bakersfield-Muni (06-029-2012), Partisol, 1in3 and 1in6, 116 filters

Plus, two requests for funding for aged equipment:

I would like to request funding for a FEM2.5 BAM for Simi Valley. Currently we have an old BAM2.5 1020 at that site. CARB was giving away BAM2.5's about 10 years ago (July 2002). BAM's were a new thought at the time. This BAM is old and antiquated and I would like to replace it. Two years ago we received funding for FEM2.5 for our other sites. I am requesting ~\$23K for a new FEM2.5. By getting a FEM2.5 at Simi Valley, depending upon the reg's and what you say, we may be able to remove the FRM2.5, or reduce its operating frequency.

And, I would like to replace one of the FRM2.5, with a Partisol-2025i which has a price tag of \$22K. We have 3 operating right now, they are 6+ years old. I would like to start replacing these in the next few years, by spacing their purchase and replacing the ailing FRM2.5 Partisol-2025 at a rate of one per year.

Thank you for the help,

Kent





Ventura County  
Air Pollution  
Control District

669 County Square Drive  
Ventura, California 93003

tel 805/645-1400  
fax 805/645-1444  
www.vcapcd.org

Michael Villegas  
Air Pollution Control Officer

June 20, 2013

*Meredith Kurpius, KF*  
~~Matthew Lakin~~, Manager  
Air Quality Analysis Office  
U.S. Environmental Protection Agency  
Region 9  
75 Hawthorne Street  
San Francisco, California 94105

Subject: Request to discontinue continuous hydrocarbon sampling at Simi Valley due to equipment failure and Ventura County's future within the PAMS monitoring network

*Ms. Kurpius, KF*  
~~Mr. Lakin~~,

Per 40 CFR 58.14 (System modification), this letter is a formal request by the Ventura County Air Pollution Control District (VCAPCD or District) to make a change to the pollutants monitored as part of the Photochemical Assessment Monitoring Stations (PAMS) network in Ventura County. Specifically, the VCAPCD requests that the U.S. Environmental Protection Agency (EPA) allow the District to temporarily discontinue collection of continuous hydrocarbon data at our Simi Valley air monitoring PAMS site type 3 due to equipment failure and the cost to repair that equipment.

EPA is currently re-engineering the PAMS program, and it appears that Ventura County will not be a part of the PAMS program once the effort is completed. We are requesting that we be allowed to discontinue the continuous hydrocarbon monitoring at the Simi Valley site until such time the EPA PAMS re-engineering effort is finalized, and we know whether or not Ventura County will be a part of the PAMS network.

I expressed these concerns via email in May 2013 to our EPA Region 9 contact, Meredith Kurpius, PhD. She spoke to Kevin Cavender about our request, and he agreed that it probably didn't make sense to replace the instruments. He suggested a formal letter as part of our annual network plan. Therefore, this letter is being included in Appendix F, Air Monitoring Network Related Correspondence in our 2013 *Ambient Air Monitoring Network Plan*.

In December 2012, at the Simi Valley site, our hydrogen generator began to fail, and in January 2013, our hydrocarbon analyzer began to fail. Both pieces of equipment failed in April 2013. The cost to repair the hydrogen generator is \$2,330, and the cost to repair the hydrocarbon analyzer is \$8,200. Carrier and calibration gases are approximately \$400 per month. Additionally, I am concerned about the investment of staff time and effort to operate the continuous hydrocarbon analyzer at or below the edge of its lower detection limit. As manager of the VCAPCD Monitoring Division, I try to make sure we work efficiently and productively. I



K. Field to M. Lakin – HC at Simi Valley, PAMS

June 20, 2013

Page 2

am concerned about such a large expenditure of money and staff time to repair equipment for a program that may be eliminated in the near future in Ventura County.

I look forward to your response to this request. Should you have any questions, please contact me at 805-662-6960, or by email at [kent@vcapcd.org](mailto:kent@vcapcd.org).

Regards,



Kent Field  
Manager - Monitoring Division  
Ventura County Air Pollution Control District

C: Mike Villegas, APCO VCAPCD  
Meredith Kurpius, PhD, Air Division EPA Region 9  
Mike Miguel, Chief ARB Quality Assurance Section  
Karen Magliano, Chief ARB Air Quality Data Branch



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street

San Francisco, CA 94105-3901

DEC 17 2013

Kent Field  
Manager, Air Monitoring Division  
Ventura County Air Pollution Control District  
669 County Square Drive, 2nd Floor  
Ventura, California 93003-5417

Dear Mr. Field:

Thank you for your submission of the Ventura County Air Pollution Control District's (APCD's) 2013 Ambient Air Monitoring Network Plan in July 2013. We have reviewed the submitted document based on the requirements set forth under 40 CFR 58. Based on the information provided in the plan, EPA approves all portions of the network plan except those specifically identified below. With this plan approval, we also note that EPA Headquarters has approved the following change to the PAMS network, per 40 CFR 58.11(c): discontinuation of continuous hydrocarbon sampling at Simi Valley-Cochran Street monitoring station.

Please note that we cannot approve portions of the annual network plan for which the information in the plan is insufficient to judge whether the requirement has been met, or for which the information, as described, does not meet the requirements as specified in 40 CFR 58.10 and the associated appendices. EPA Region 9 also cannot approve portions of the plan for which the EPA Administrator has not delegated approval authority to the regional offices. Accordingly, the first enclosure (*A. Annual Monitoring Network Plan Items where EPA is Not Taking Action*) provides a listing of specific items of your agency's annual monitoring network plan where EPA is not taking action. The second enclosure (*B. Additional Items Requiring Attention*) is a listing of additional items in the plan that EPA wishes to bring to your agency's attention.

The third enclosure (*C. Annual Monitoring Network Plan Checklist*) is the checklist EPA used to review your plan for overall items that are required to be included in the annual network plan along with our assessment of whether the plan submitted by your agency addresses those requirements.

The first two enclosures highlight a subset of the more extensive list of items reviewed in the third enclosure. All comments conveyed via this letter (and enclosures) should be addressed (through corrections within the plan, additional information being included, or discussion) in next year's annual monitoring network plan.

APCD  
13 DEC 23 11:56  
RECEIVED  
75 HAWTHORNE ST  
SAN FRANCISCO, CA 94105-3901

Printed on Recycled Paper

If you have any questions regarding this letter or the enclosed comments, please feel free to contact me at (415) 947-4534 or Dena Vallano at (415) 972-3134.

Sincerely,



Meredith Kurpius, Manager  
Air Quality Analysis Office

Enclosures:

- A. Annual Monitoring Network Plan Items where EPA is Not Taking Action
- B. Additional Items Requiring Attention
- C. Annual Monitoring Network Plan Checklist

cc: Michael Villegas, Ventura County APCD  
Gayle Sweigert, California Air Resources Board



Ventura County  
Air Pollution  
Control District

669 County Square Drive  
Ventura, California 93003

tel 805/645-1400  
fax 805/645-1444  
www.vcapcd.org

Michael Villegas  
Air Pollution Control Officer

December 18, 2013

Meredith Kurpius, Manager  
Air Quality Analysis Office  
U.S. Environmental Protection Agency  
Region 9  
75 Hawthorne Street  
San Francisco, California 94105

Subject: Request to discontinue CSN Simi Valley sampling

Ms. Kurpius,

Per 40CFR58.14 (System modification), this letter is a formal request by the Ventura County Air Pollution Control District (VCAPCD) to discontinue Chemical Speciation Network sampling at the Simi Valley air quality monitoring site (Site #061112002).

Ventura County has been operating the Simi Valley CSN SASS sampler since December 2001 and additionally the URG sampler since March 2009. Many of the original factors that gave value to the CSN program at Simi Valley are coming to an end. The Simi Valley CSN site was a trend site, and over the 12 years it has operated the trend has been established. The Simi CSN site is part of the MESA study. The MESA study is ending. The CSN Network is being reviewed by EPA to create a CSN network that is sustainable (effective and efficient), that better distributes financial resources -, gets more value out of the CSN sites, and focuses the monitoring effort to NCore, Improve, and PAMS sites. We are not NCore or Improve, and our PAMS sites are going away in the near future. PAMS re-engineering documentation has indicated that Simi Valley will not be part of the future PAMS program. As a note, Ventura County is designated an attainment area for the federal PM2.5 standards. Additionally, the main overruling issue with CSN sampling at Simi Valley for us is our limited staffing levels, our inability to meet the sampling schedule, and the cost of the program. The value of the data does not warrant staff and equipment time of 6 to 10+ hours per week. In addition to set-up and recovery of the samples (field data sheets, operational data download, shipping documentation), we also maintain the samplers (cleaning and review of the internal equipment), conduct monthly leak, flow, temperature, and pressure checks, and perform six-monthly calibrations and major maintenance. Additionally, we purchase and replace SASS and URG parts. Annual parts expenditures are \$2500 to \$3000. EPA had been performing annual Quality Assurance audits on the sampling equipment, but EPA has not done a performance audit since 2008.

Based on the above realities, I am requesting to discontinue CSN sampling at the Simi Valley air monitoring site, effective January 2014.

K. Field to M. Kurpius – Request to discontinue CSN at Simi Valley  
 December 19, 2013  
 Page 2

I look forward to your response to this request. Should you have any questions, please contact me at 805-662-6960, or by email at [kent@vcapcd.org](mailto:kent@vcapcd.org).

Regards,



Kent Field  
 Manager - Monitoring Division  
 Ventura County Air Pollution Control District

C: Dena Vallano, Air Division EPA Region 9  
 Katherine Hoag, Air Division EPA Region 9  
 Mike Villegas, APCO VCAPCD





Ventura County  
Air Pollution  
Control District

669 County Square Drive  
Ventura, California 93003

tel 805/645-1400  
fax 805/645-1444  
www.vcapcd.org

Michael Villegas  
Air Pollution Control Officer

March 18, 2014

Michael Miguel  
Branch Chief, Quality Management  
Monitoring and Laboratory Division  
California Air Resources Board  
P.O. Box 2815  
Sacramento, CA 95812

SUBJECT: Results of Ventura County Air Pollution Control District FRM vs. FEM  
Comparability Assessment for PM2.5 and PM10 Particulate Monitoring

Mr. Miguel,

*Mike*

This letter is a follow up to our phone conference Wednesday afternoon, March 12, 2014. The subject of that conference was the Ventura County Air Pollution Control District's (VCAPCD) staff request to discontinue filter-based FRM (Federal Reference Method) sampling for PM2.5 and PM10, and to monitor particulates solely by continuous FEM (Federal Equivalent Method) samplers. Our request is based on analysis of data from our side-by-side comparison of FRM and FEM measurement methods over the past two years. The comparison shows good data agreement, allowing VCAPCD staff to have confidence in moving forward with continuous FEM PM2.5 and PM10 monitors exclusively.

The continuous FEM particulate monitors collect particulate data hourly, and the hourly data are available to VCAPCD staff within minutes after each hour. FRM particulate monitors collect data for a 24-hour period on a periodic schedule: 1-in-3, 1-in-6, or 1-in-12 days. Particulate concentration data for a day of FRM sampling is not available for 7 to 14 days. The continuous FEM method allows staff to very quickly respond to air quality issues related to particulates.

In November 2011, in a letter to Matt Lakin at EPA Region 9, we committed to conduct a comparability analysis of VCAPCD's FRM and FEM PM2.5 and PM10 monitors. If the analysis showed good agreement between the FRMs and the FEMs, we proposed to reduce FRM sampling, and retain FEM sampling at the study sites. Mr. Lakin replied in February 2012, expressing support for the District's plans to move to FEM monitors in Ventura County. These letters were included in an appendix to our 2013 Annual Network Plan. Our intent to move toward continuous PM monitoring was also discussed the previous year in our 2012 Annual Network Plan. We received no adverse public comments about our proposed changes to the Ventura County Air Monitoring Network.

Due to sampler supply issues with the manufacturer, we were not able to install FEM PM2.5 samplers to allow for a complete year of monitoring in 2012. Therefore, we were not able to complete our analysis for the comparative study for calendar year 2012 as we had planned. The

K. Field to M. Miguel  
 March 18, 2014  
 Page 2 of 4

datasets used for the analysis are partial years of 2012, and all of 2013. Once data through the end of 2013 had been submitted to AQS, we began analysis of the data in the study areas.

During the data collection and preliminary analysis for this comparability assessment, I had numerous email exchanges with Kate Hoag, Meredith Kurpius, Tim Hanley of EPA and Karen Magliano, Merrin Wright, and Sylvia Zulawich of CARB to confirm data and analysis requirements.

On February 26, 2014, my staff and I had a phone conversation with Kate Hoag of EPA Region 9 to discuss our analysis of PM<sub>2.5</sub> comparability. Kate was pleased with our PM<sub>2.5</sub> FRM vs. FEM comparison data. She suggested that, since the California Air Resources Board (CARB) is our Primary Quality Assurance Organization (PQAO), we discuss our plans with CARB staff to get your agreement on the data findings and changes to our particulate monitoring network.

This letter documents our current particulate network sampling configuration in Ventura County, and the future configuration resulting from our conversation of March 12, 2014, as well as conversations with EPA staff. Also present at the phone conference on March 12, 2014, besides you and I, were Jeff Wright and Pheng Lee from CARB, and Mallory Ham, Jim McElroy, Phil Moyal and Elaine Searcy of my staff.

Our current monitoring configuration for PM<sub>2.5</sub> and PM<sub>10</sub> is as follows:

Site	PM <sub>2.5</sub> FRM	PM <sub>2.5</sub> FEM	PM <sub>10</sub> FRM	PM <sub>10</sub> FEM
El Rio 061113001	✓ 1-in-6 days	✓	✓✓* 1-in-6 days	✓
Simi Valley 061112002	✓ 1-in-3 days	✓	✓ 1-in-6 days	✓
Thousand Oaks 061110007	✓ 1-in-6 days	✓		
Piru 061110009		✓		
Ojai 061110004		✓		

\* Primary and co-located monitors.

#### PM<sub>10</sub> Comparison

Our PM<sub>10</sub> FRM vs. FEM comparison included the Simi Valley and El Rio monitoring sites. We compared Simi Valley PM<sub>10</sub> data for the period June 2012 through December 2013, and El Rio data for the period July 2012 through December 2013. Time series graphs and slope intercept comparability graphs are attached to show the results of the analysis.

You indicated that our historical data comparison of FEM PM<sub>10</sub> to FRM PM<sub>10</sub> data looks really good and you and the other CARB staff are very pleased and impressed with the comparison and

K. Field to M. Miguel  
 March 18, 2014  
 Page 3 of 4

how well the PM10 FRM and FEM compare. You said that there are no co-location issues with the FEM PM10 and that you are satisfied with the results of our analysis. You stated that we may proceed in removing three FRM PM10 hi volume samplers – two at the Simi Valley site (primary and co-located) and one at the El Rio site. We stated that we will be retaining the existing FEM PM10 monitors at the El Rio and Simi Valley sites. Each existing FEM PM10 monitor will be designated the primary PM10 monitor for the respective site.

#### PM2.5 Comparison

The PM2.5 FRM vs. FEM comparison included the Simi Valley, El Rio, and the Thousand Oaks monitoring sites. We compared data for all three sites for the period January 2012 through December 2013. At the Simi Valley site, we used Non-FEM PM2.5 data for the period January 2012 through June 2013, as the FEM monitor was not in place until July 2013. Time series graphs are attached for all three sites used for the analysis. Also attached are results from the EPA Online Comparability Assessment Tool and the EPA Excel Spreadsheet for FRM vs. FEM Comparability.

During our conversation, you said you spoke earlier with Katherine Hoag at EPA Region 9 about our PM2.5 FRM vs. FEM analysis, and she stated that our data looks good. You stated that you are happy with the results of our data comparison.

Since CARB is our PQAQ, you said that in an effort to satisfy PQAQ co-location requirements, you would like Ventura County APCD staff to install a co-located FEM PM2.5 monitor at the Simi Valley site. You asked/suggested if this could be done by the beginning of the next quarter, which we agreed to do. You gave us verbal approval to remove FRM PM2.5 monitors at Simi Valley, El Rio, and Thousand Oaks. We stated that we will be retaining the existing FEM PM2.5 monitors at all sites (five in total, El Rio, Ojai, Piru, Simi Valley, Thousand Oaks) and we will install a new co-located FEM PM2.5 at the Simi Valley by April 1, 2014. The existing FEMs at the study sites will be designated as primary monitors, and the new FEM PM2.5 BAM 1020 monitor will be designated as the co-located monitor. All FEM PM2.5 monitors in the Ventura County air monitoring network are already reported using parameter code 88101, so there will be no additional changes needed to parameter codes.

Because Ventura County APCD is scheduled for CARB annual performance audits at the end of April to mid-May 2014, we mutually agreed that we would continue to operate the FRM monitors until completion of the audits before discontinuing FRM particulate monitoring. The CARB audits will be good final documentation on the performance of the FRM monitors just before shut-down.

Additionally, you and Jeff Wright wanted to know how we achieved the data quality from our PM2.5 program. You stated that our program has the best performance data in California and 2<sup>nd</sup> best in the country. You asked if you could send some of your staff to Ventura County to observe



K. Field to M. Miguel  
March 18, 2014  
Page 4 of 4

and document our procedures. We would welcome such a visit, in an effort to help improve procedures and data collection in the state.

In summary, our future monitoring configuration for PM2.5 and PM10 will be as follows:

Site	PM2.5 FRM	PM2.5 FEM	PM10 FRM	PM10 FEM
El Rio 061113001	Discontinue	✓	Discontinue	✓
Simi Valley 061112002	Discontinue	✓✓*	Discontinue (primary and co-located)	✓
Thousand Oaks 061110007	Discontinue	✓		
Piru 061110009		✓		
Ojai 06111004		✓		

\* Primary and co-located monitors. The co-located monitor will be a new monitor, effective April 1, 2014. FRM monitoring will end upon completion of CARB audits in April/May 2014.

I appreciate CARB and EPA staff's time and cooperation on this multi-year effort to improve the Ventura County Air Monitoring Network and the ability to provide continuous, real-time data to the citizens of Ventura County. Please contact Jim McElroy at 805/662-6958 to schedule time to observe site operations for the PM2.5 program. If you have any additional questions regarding the FRM vs. FEM comparability, please contact Elaine Searcy at 805/645-1431.

Sincerely,



Kent Field, Manager  
Monitoring and Technical Services Division

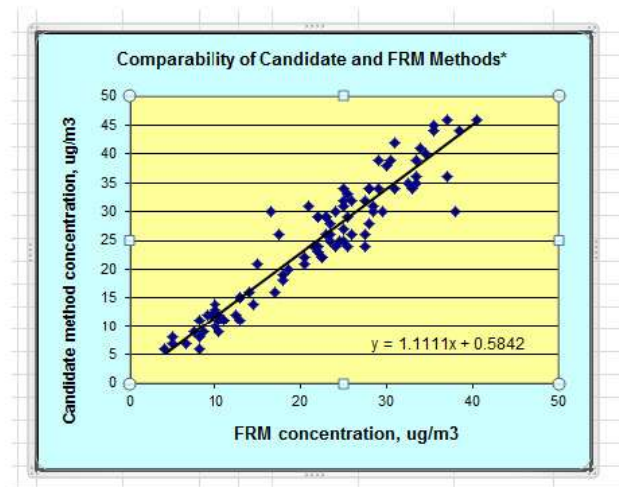
Attachments

CC:

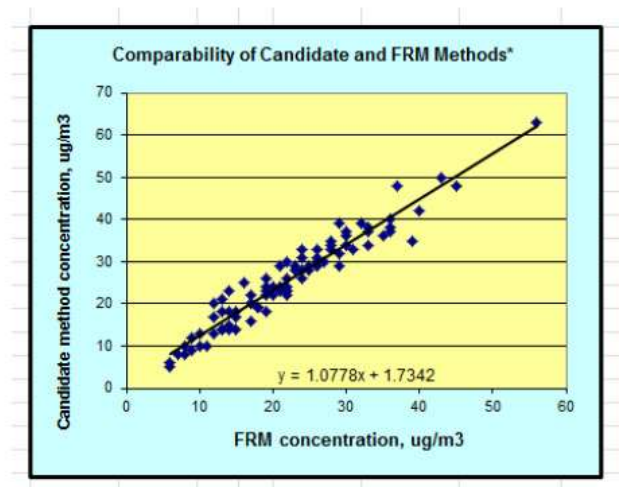
Katherine Hoag, EPA Region 9  
Dena Vallano, EPA Region 9  
Meredith Kurpius, EPA Region 9  
Jeff Wright, CARB  
Pheng Lee, CARB

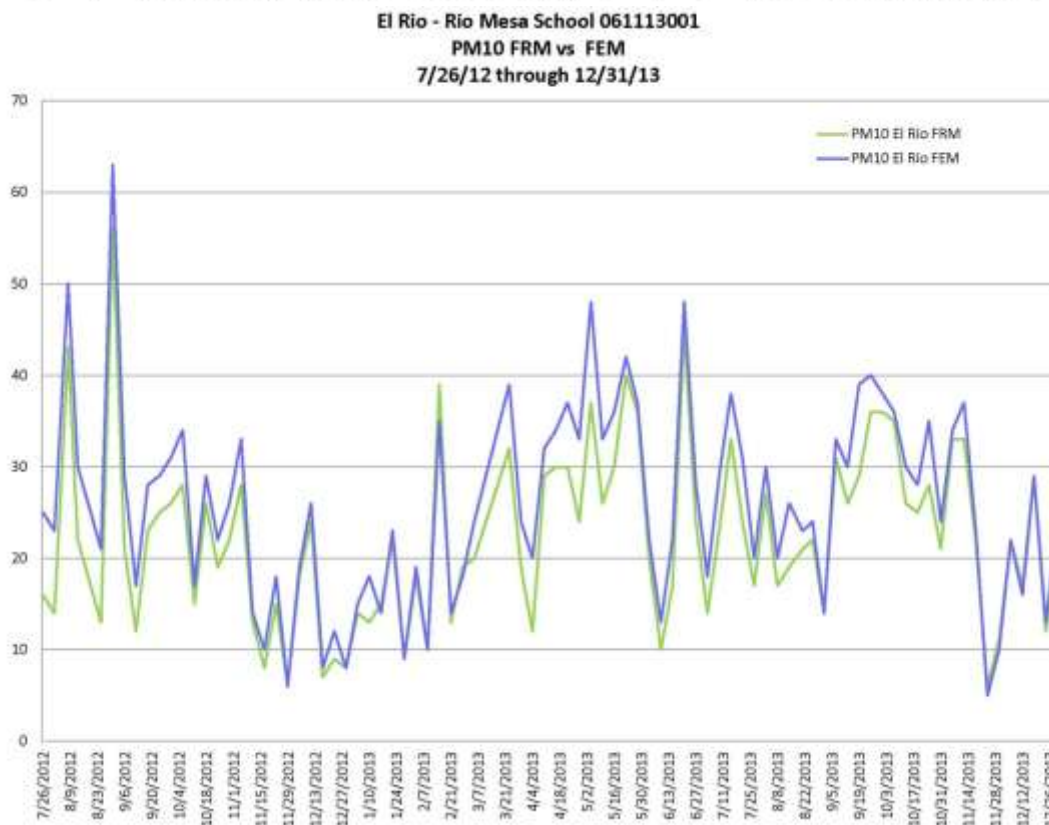
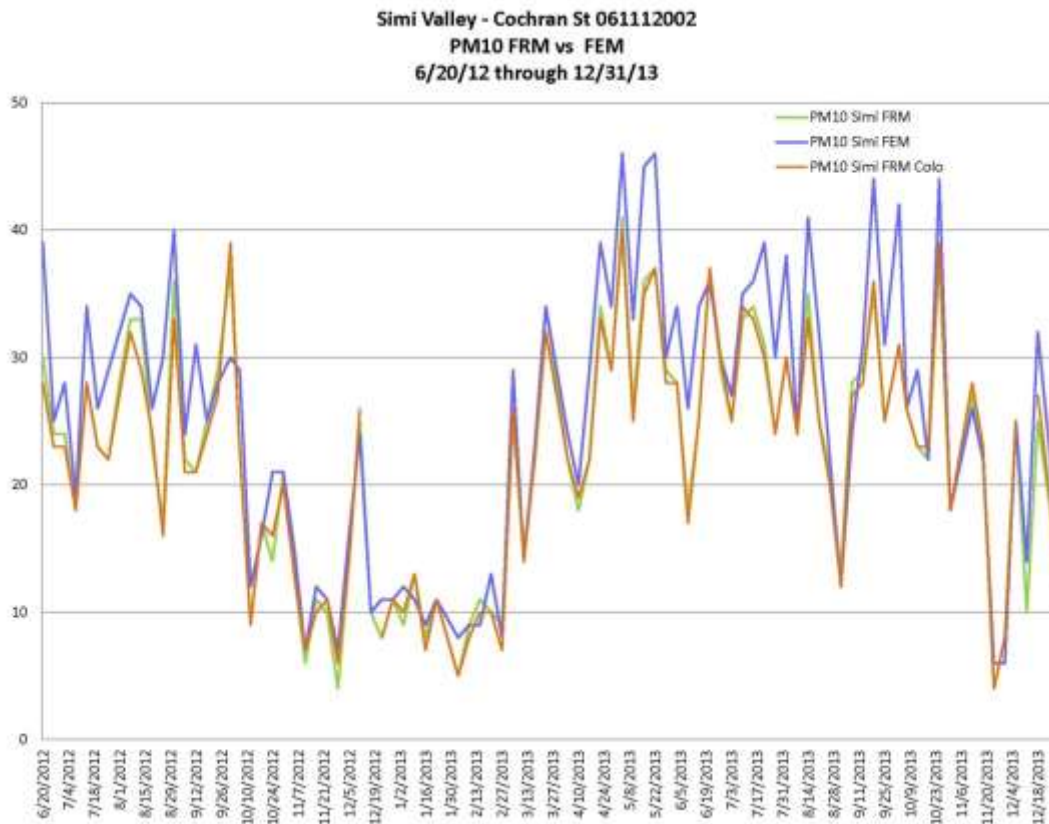
### Comparability of FRM and FEM PM10 at Air Monitoring Sites in Ventura County

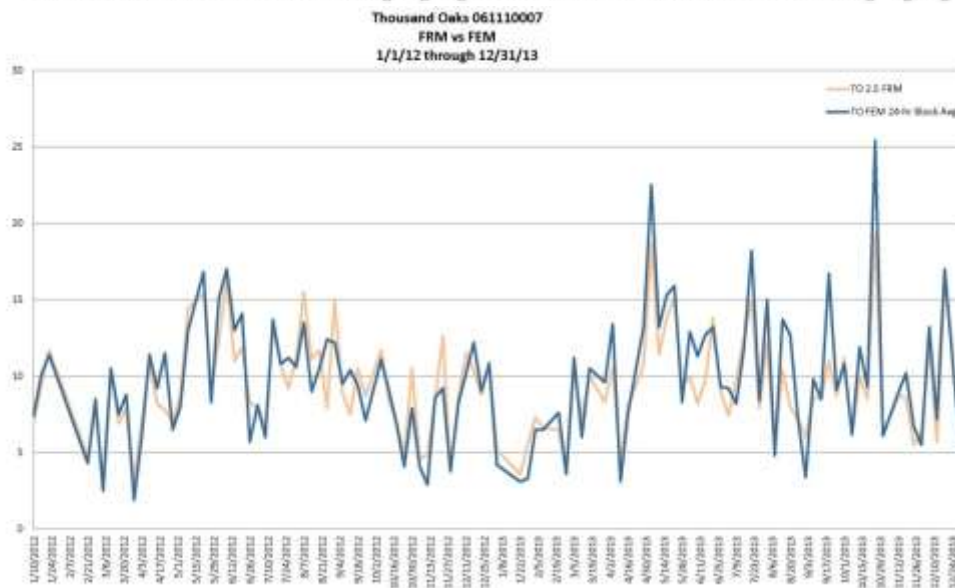
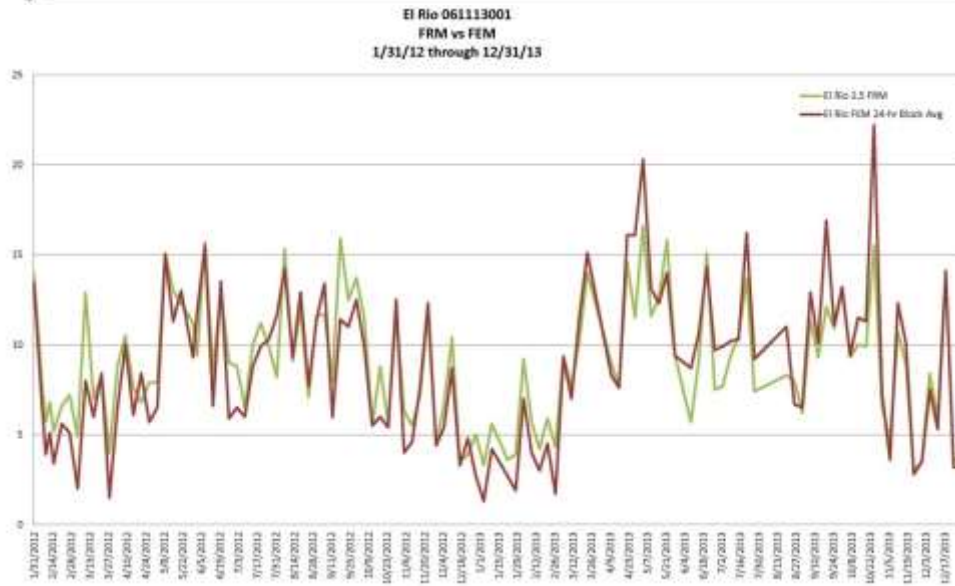
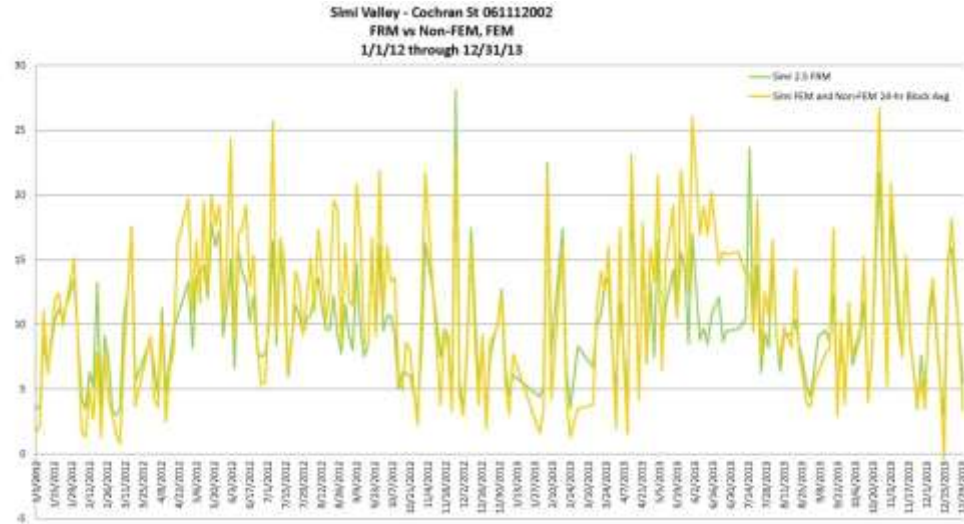
**Simi Valley (061112002)** FRM/FEM Comparability  
(with primary and co-located datasets)  
correlation  $r=0.9459$



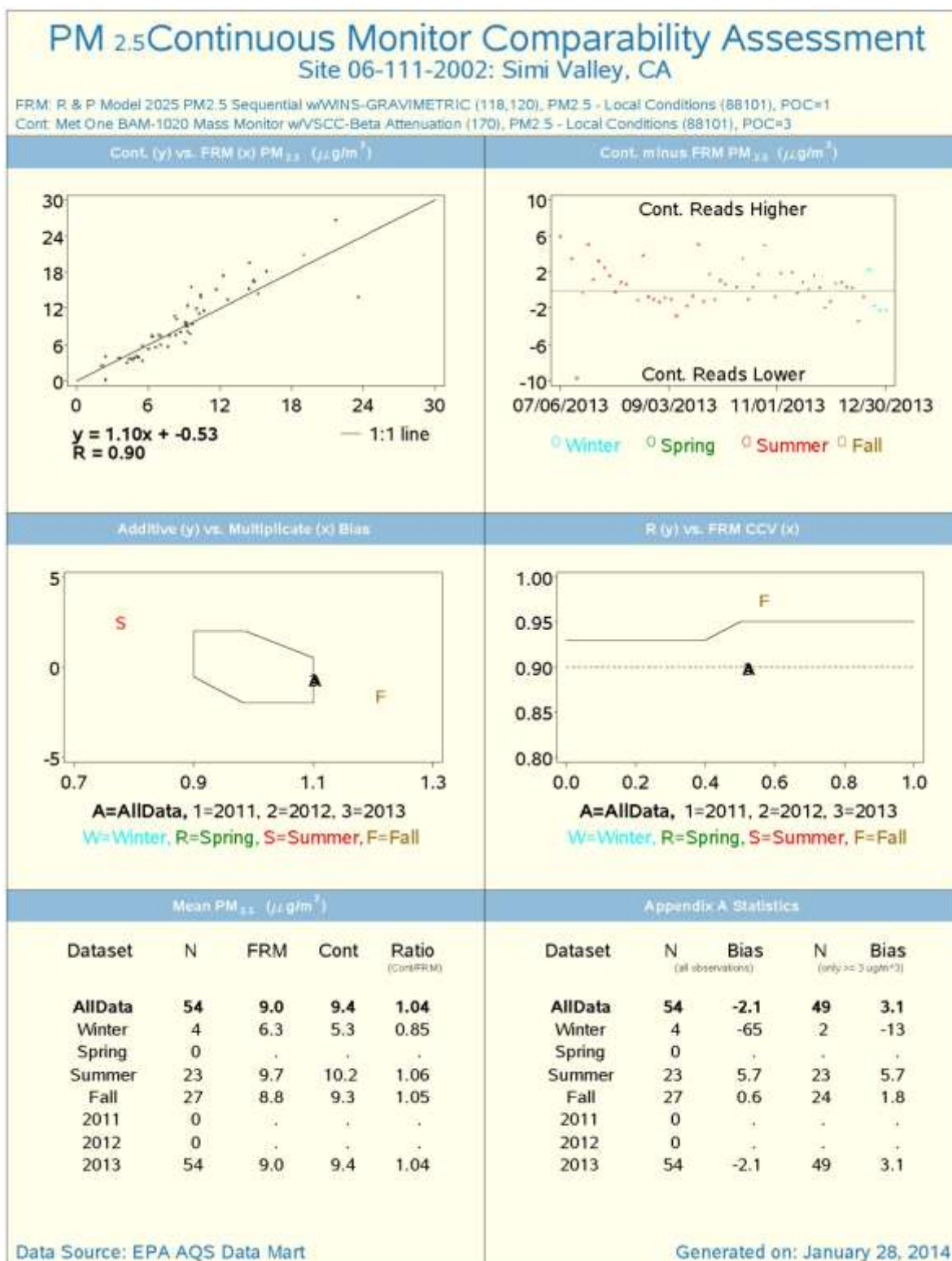
**El Rio (061113001)** FRM/FEM Comparability  
correlation  $r=0.9642$

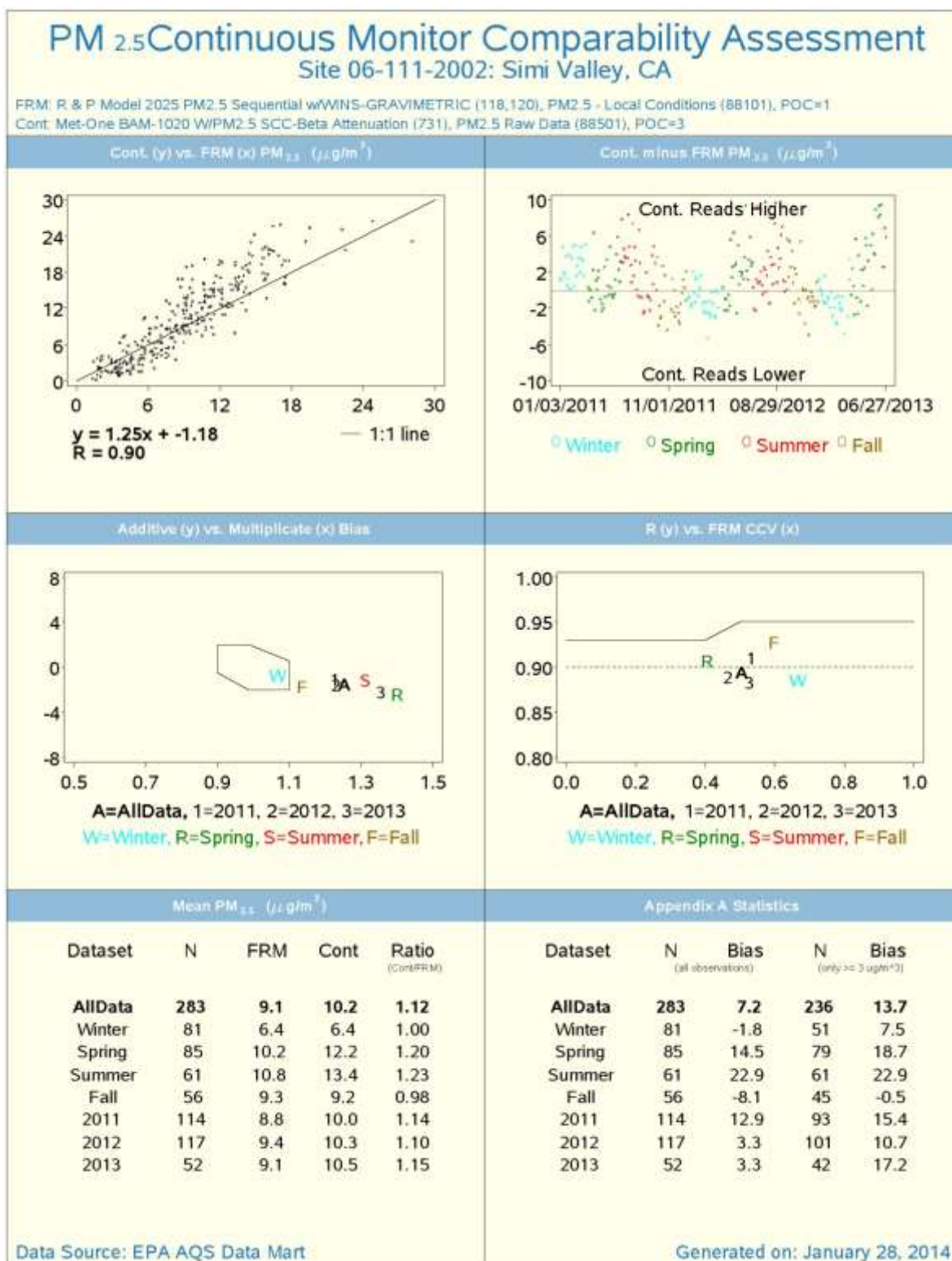






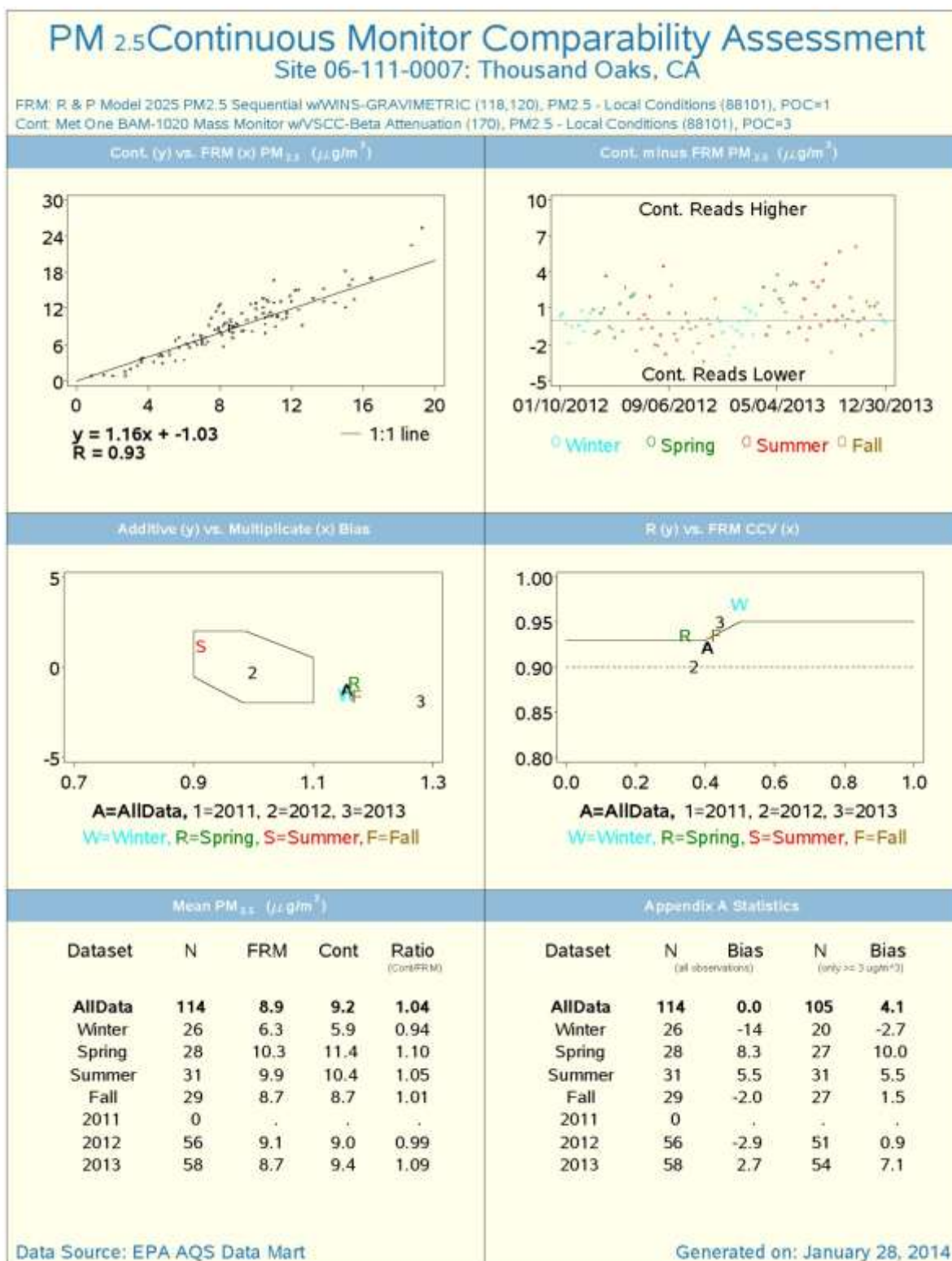












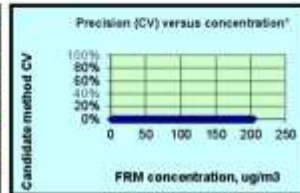


### Summary - Candidate ARM Comparability

Applicant:	Ventura County APCD
Candidate method:	Non-FEM Data 1/1/2012 to 6/27/2013. FEM data 7/6/2013 to 12/31/13. - Class
Test site:	Simi Valley - (Site location 61112002)

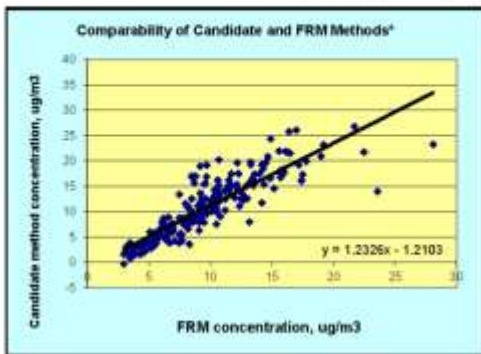
Data sets	Number
Valid data sets available:	204
Number of valid data sets required for ARM Comparison:	90
Number of valid data sets for this test is:	OK
Additional data sets needed:	--

Precision (If data are available)	Data set mean, $\mu\text{g}/\text{m}^3$		Data set precision, $\mu\text{g}/\text{m}^3$		Relative precision (CV)	
	FRM	Candidate	FRM	Candidate	FRM	Candidate
Mean:	9.8	10.9				
Maximum:	28.1	28.7				
Minimum:	3.0	-0.4				
Candidate / FRM Ratio:		110.9%				
RMS Relative Precision for this site:						
Test requirements - Class III:						10.0%
Precision Test Results for site:						15.0%



Regression statistics		Slope'	Intercept'	Correlation (r)
Statistics for this test site:		1.233	-1.210	0.87106
Limits for	Upper:	1.100	-1.220	
Class III	Lower:	0.900	-2.000	0.93718
Test Results (Pass/Fail):		FAIL	FAIL	FAIL

Note: Precision statistics can be calculated only for data sets containing multiple FRM or multiple candidate AFM measurements.



If chart does not plot correctly, go to the Regression sheet and click on the ▼ in the Validity column and then on "ok." If new data are added, click "all" then "ok" to include the new data.

Calculations for the intercept limits graphic:

Size	PM2.5
Size	PM2.5
Cat (III)	III
Comb	PM2.5-III-

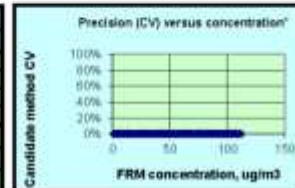
Limits Point	PM2.5-I		PM2.5-II		PM2.5-III		PM2.5-IV		PM2.5-V		PM2.5-VI		Applicable I
	PM2.5-I-S	PM2.5-I-L	PM2.5-II-S	PM2.5-II-L	PM2.5-III-S	PM2.5-III-L	PM2.5-IV-S	PM2.5-IV-L	PM2.5-V-S	PM2.5-V-L	PM2.5-VI-S	PM2.5-VI-L	
1	0.9	1.5	0.9	1.5	0.9	1.5	0.9	1.5	0.9	1.5	0.9	1.5	2.00
2	1.0006645	1.5	0.989836384	1.5	1.070212786	1.5	1.038	1.7	0.99	2.00	0.99	2.00	0.50
3	1.1	0.005	1.1	0.53	1.1	1.4	1.12	2.00	1.10	0.93	1.10	0.93	2.00
4	1.1	-1.5	1.1	-2	1.1	-3.5	1.12	-7	1.10	-2.00	1.10	-2.00	0.50
5	0.989336	-1.5	0.98441085	-2	0.929787234	-3.5	0.935	-7	0.98	-2.00	0.98	-2.00	0.50
6	0.9	-0.004	0.9	-0.538	0.9	-1.4	0.88	-2.5	0.90	-0.54	0.90	-0.54	0.50
7	0.9	1.5	0.9	2	0.9	3.5	0.88	7	0.90	2.00	0.90	2.00	0.50

## Summary - Candidate ARM Comparability

Applicant:	Ventura County APCD
Candidate method:	FEM data 1/31/2012 to 12/31/13 - Class
Test site:	El Rio - (Site location 61113001)

Data sets	Number
Valid data sets available:	112
Number of valid data sets required for ARM Comparison:	90
Number of valid data sets for this test is:	OK
Additional data sets needed:	—

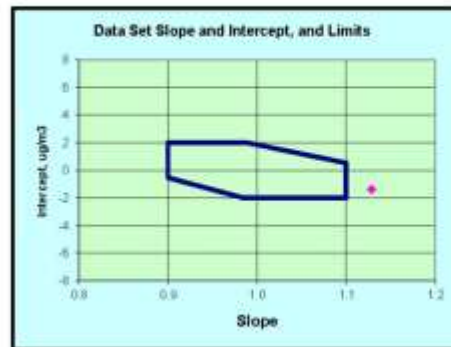
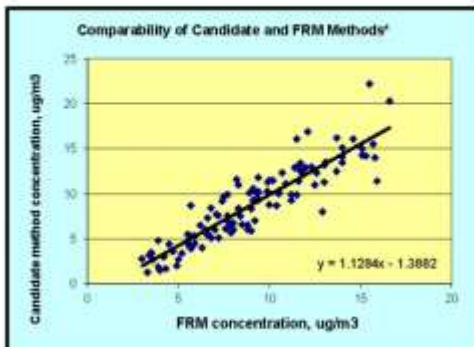
Precision (If data are available)	Data set mean, $\mu\text{g}/\text{m}^3$		Data set precision, $\mu\text{g}/\text{m}^3$		Relative precision (CV)	
	FRM	Candidate	FRM	Candidate	FRM	Candidate
Mean:	9.9	8.7				
Maximum:	16.6	22.2				
Minimum:	3.0	1.3				
Candidate / FRM Ratio:		87.4%				
RMS Relative Precision for this site:						
Test requirements - Class III:					10.0%	15.0%
Precision Test Results for site:						



Regression statistics	Slope <sup>a</sup>	Intercept <sup>a</sup>	Correlation (r)
Statistics for this test site:	1.128	-1.388	0.90835
Limits for	Upper:	1.100	0.155
Class III	Lower:	0.900	-2.000
Test Results (Pass/Fail):	FAIL	PASS	FAIL

<sup>a</sup>Multiplicative bias <sup>b</sup>Additive bias

Note: Precision statistics can be calculated only for data sets containing multiple FRM or multiple candidate ARM measurements.



If chart does not plot correctly, go to the Regression sheet and click on the ▼ in the Validity column and then on "ok." If new data are added, click "all" then "ok" to include the new data.

Calculations for the intercept limits graphic:

Precision limit calculation	
Size	PM2.5
Size	PM2.5
Cat (I/II/III)	III
Comb	PM2.5-III

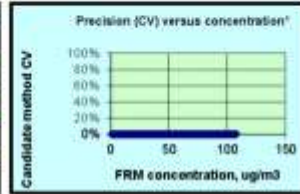
Limits	PM2.5-II		PM2.5-III		PMc-II		PMc-III		Applicable
Point	PM2.5-II-S	PM2.5-II-I	PM2.5-III-S	PM2.5-III-I	PMc-II-S	PMc-II-I	PMc-III-S	PMc-III-I	I
1	0.9	1.5	0.9	2	0.9	3.5	0.88	7	0.90 2.00
2	1.0006645	1.5	0.998636364	2	1.070212766	3.5	1.038	7	0.99 2.00
3	1.1	0.005	1.1	0.53	1.1	1.4	1.12	2.00	1.10 0.53
4	1.1	-1.5	1.1	-2	1.1	-3.5	1.12	-7	1.10 -2.00
5	0.9993355	-1.5	0.984411085	-2	0.929787234	-3.5	0.935	-7	0.98 -2.00
6	0.9	-0.004	0.9	-0.538	0.9	-1.4	0.88	-2.5	0.90 -0.54
7	0.9	1.5	0.9	2	0.9	3.5	0.88	7	0.90 2.00

### Summary - Candidate ARM Comparability

Applicant:	Ventura County APCD
Candidate method:	FEM data 1/1/2012 to 12/31/13 - Class
Test site:	Thousand Oaks - (Site location 61110007)

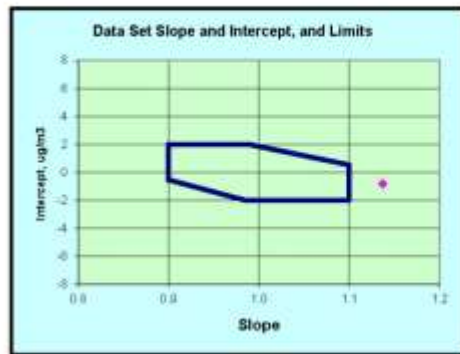
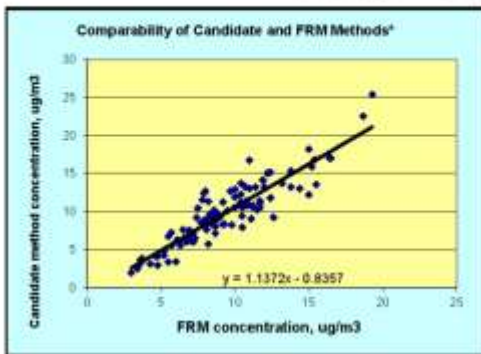
Data sets	Number
Valid data sets available:	108
Number of valid data sets required for ARM Comparison:	90
Number of valid data sets for this test is:	OK
Additional data sets needed:	--

Precision (If data are available)	Data set mean, $\mu\text{g}/\text{m}^3$		Data set precision, $\mu\text{g}/\text{m}^3$		Relative precision (CV)	
	FRM	Candidate	FRM	Candidate	FRM	Candidate
Mean:	9.2	9.7				
Maximum:	19.3	25.4				
Minimum:	3.0	1.9				
Candidate / FRM Ratio:		104.7%				
RMS Relative Precision for this site:						
Test requirements - Class III:					10.0%	15.0%
Precision Test Results for site:						



Regression statistics		Slope'	Intercept'	Correlation (r)
Statistics for this test site:		1.137	-0.836	0.90924
Limits for	Upper:	1.100	0.039	
Class III	Lower:	0.900	-2.000	0.93000
Test Results (Pass/Fail):		FAIL	PASS	FAIL

Note: Precision statistics can be calculated only for data sets containing multiple FRM or multiple candidate ARM measurements.



If chart does not plot correctly, go to the Regression sheet and click on the ▼ in the Validity column and then on "ok." If new data are added, click "all" then "ok" to include the new data.

Calculations for the intercept limits graphic:

Size	PM2.5
Size	PM2.5
Cat (I/II)	II
Comb	PM2.5-II-

Limits	PM2.5-I		PM2.5-II		PM2.5-III		PM2.5-IV		PM2.5-V		PM2.5-VI		PM2.5-VII		PM2.5-VIII		PM2.5-IX		PM2.5-X		PM2.5-XI		PM2.5-XII		PM2.5-XIII		PM2.5-XIV		PM2.5-XV		PM2.5-XVI		PM2.5-XVII		PM2.5-XVIII		PM2.5-XIX		PM2.5-XX		PM2.5-XXI		PM2.5-XXII		PM2.5-XXIII		PM2.5-XXIV		PM2.5-XXV		PM2.5-XXVI		PM2.5-XXVII		PM2.5-XXVIII		PM2.5-XXIX		PM2.5-XXX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII		PM2.5-XXXIX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII		PM2.5-XXXIX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII		PM2.5-XXXIX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII		PM2.5-XXXIX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII		PM2.5-XXXIX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII		PM2.5-XXXIX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII		PM2.5-XXXIX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII		PM2.5-XXXIX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII		PM2.5-XXXIX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII		PM2.5-XXXIX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII		PM2.5-XXXIX		PM2.5-XXXI		PM2.5-XXXII		PM2.5-XXXIII		PM2.5-XXXIV		PM2.5-XXXV		PM2.5-XXXVI		PM2.5-XXXVII		PM2.5-XXXVIII
--------	---------	--	----------	--	-----------	--	----------	--	---------	--	----------	--	-----------	--	------------	--	----------	--	---------	--	----------	--	-----------	--	------------	--	-----------	--	----------	--	-----------	--	------------	--	-------------	--	-----------	--	----------	--	-----------	--	------------	--	-------------	--	------------	--	-----------	--	------------	--	-------------	--	--------------	--	------------	--	-----------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------	--	-------------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------	--	-------------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------	--	-------------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------	--	-------------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------	--	-------------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------	--	-------------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------	--	-------------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------	--	-------------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------	--	-------------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------	--	-------------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------	--	-------------	--	------------	--	-------------	--	--------------	--	-------------	--	------------	--	-------------	--	--------------	--	---------------





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
RESEARCH TRIANGLE PARK, NC 27711

March 26, 2014

OFFICE OF  
AIR QUALITY PLANNING  
AND STANDARDS

Mr. Kent Field  
Manager - Monitoring Division  
Ventura County Air Pollution Control District  
669 County Square Drive  
Ventura, CA 93003

Dear Mr. Field: *Kent*

This letter transmits our approval of discontinuation of sampling at the Simi Valley Chemical Speciation Network (CSN) air monitoring site (AQS ID 06-111-2002). The Simi Valley CSN site is also part of the Speciation Trends Network (STN), and requirements for the STN network are prescribed in the Ambient Air Monitoring Regulations. According to 40 CFR 58.11(c), STN design changes must be approved by the Environmental Protection Agency's (EPA) Administrator. The authority for approvals and changes for this network has been delegated to the Director of the Air Quality Assessment Division in EPA's Office of Air Quality Planning and Standards.

In your letter dated December 18<sup>th</sup>, 2013 to Dr. Kurpius of EPA Region 9, you outlined the fact that many of the original factors that added value to the CSN by monitoring in Simi Valley have changed. For the purposes of trends, over 12 years of data has been collected. The site was part of the MESA Air Pollution study, which is coming to a close in 2014. The site is also collocated with a Photochemical Assessment Monitoring Stations (PAMS) site, which has been identified for discontinuation through the PAMS re-engineering process. The site is not collocated with any other monitoring networks (e.g., NCore or IMPROVE). You also indicated the main reason for requesting the discontinuation of sampling at the Simi Valley site is limited staffing levels, your inability to meet the sampling schedule, and the cost burden of the site on your program.

In a letter dated January 15<sup>th</sup>, 2014 from Ms. Kurpius, Region 9 concurred with your reasoning and requested EPA approval for discontinuation of speciation sampling at the Simi Valley STN site.

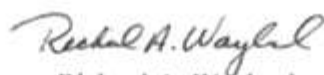
Internet Address (URL) • <http://www.epa.gov>

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on Recycled Paper (Minimum 25% Postconsumer)

We are currently conducting a Network Assessment of the CSN in an effort to optimize the network, create a more sustainable networking going forward, redistribute resources to new or high priorities from those of low-priority or low benefit, extract more value from the network, and fully leverage the value of other existing networks.

Taking all of the factors outlined above into consideration, we no longer see the added benefit of continuing operations at the Simi Valley CSN site and approve your request. We appreciate your efforts and participation in the Chemical Speciation Network over the past 13 years. If you have any questions, please contact Elizabeth Landis at [landis.elizabeth@epa.gov](mailto:landis.elizabeth@epa.gov) and 919-541-2262.

Sincerely,



Richard A. Wayland  
Director  
Air Quality Assessment Division

cc: Michael Villegas, VCAPCD  
Dr. Meredith Kurpius, EPA Region 9  
Dena Vallano, EPA Region 9  
Katherine Hoag, EPA Region 9  
Elizabeth Landis, EPA OAQPS  
Lewis Weinstock, EPA OAQPS



## Air Resources Board



**Matthew Rodriguez**  
Secretary for  
Environmental Protection

**Mary D. Nichols, Chairman**  
1001 I Street • P.O. Box 2815  
Sacramento, California 95812 • [www.arb.ca.gov](http://www.arb.ca.gov)

**Edmund G. Brown Jr.**  
Governor

March 27, 2014

Mr. Michael J. Villegas  
Air Pollution Control Officer  
Ventura County APCD  
669 County Square Drive, 2nd Floor  
Ventura, California 93003-5417

Dear Mr. Villegas:

This letter is in response to your letter dated March 18, 2014, regarding the results of Ventura County Air Pollution Control District's (VCAPCD) Federal Reference Method (FRM) vs. Federal Equivalent Method (FEM) comparability assessment for particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>) monitoring. The comparability assessment was conducted by VCAPCD to support your request to replace filter-based FRM sampling monitors (PM<sub>2.5</sub> and PM<sub>10</sub>) with continuous FEM sampling monitors.

The California Air Resources Board (ARB) appreciates the extensive effort and coordination by VCAPCD in conducting the assessment. Based on the results and data you provided, ARB concurs that there is good data agreement and supports utilizing continuous FEM (PM<sub>2.5</sub> and PM<sub>10</sub>) monitors exclusively. As noted in your letter, VCAPCD agrees to designate the FEM monitors as the primary monitors in U.S. Environmental Protection Agency's Air Quality System database, as well as install a new collocated FEM PM<sub>2.5</sub> monitor at Simi Valley by April 1, 2014. The District also agreed to continue to operate the FRM monitors pending ARB close down audits which are scheduled for May 2014.

ARB would also like to thank VCAPCD for providing ARB staff the opportunity to observe and document procedures utilized in your PM<sub>2.5</sub> Network in order to assess "best practices" utilized throughout ARB's PQAO.

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.*

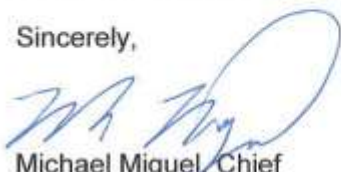
California Environmental Protection Agency

*Printed on Recycled Paper*

Mr. Michael J. Villegas  
March 27, 2014  
Page 2

If you have any questions regarding this letter, please contact Maria Salomon at (916) 322-3267 or by email at [msalomon@arb.ca.gov](mailto:msalomon@arb.ca.gov), or Patrick Rainey at (916) 327-4756 or by email at [prainey@arb.ca.gov](mailto:prainey@arb.ca.gov).

Sincerely,



Michael Miguel, Chief  
Quality Management Branch  
Monitoring and Laboratory Division

cc. Meredith Kurpius, Ph.D.  
Air Quality Analysis Office, Manager  
75 Hawthorne St., AIR-7  
San Francisco, California 94105

Dena Vallano  
Air Quality Analysis Office, Air Monitoring Team Lead  
75 Hawthorne St., AIR-7  
San Francisco, California 94105

Patrick Rainey  
Monitoring and Laboratory Division

Maria Salomon  
Monitoring and Laboratory Division



**Ventura County  
Air Pollution  
Control District**

669 County Square Drive  
Ventura, California 93003

tel 805/645-1400  
fax 805/645-1444  
www.vcapcd.org

**Michael Villegas  
Air Pollution Control Officer**

April 30, 2014

Fletcher Clover  
U.S. Environmental Protection Agency  
Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

Dear Mr. Clover,

This correspondence is to comply with: (1) 40 CFR 58.15, Annual Air Monitoring Data Certification and (2) Ventura County APCD's FY 2013 §105 EPA Grant Objective #5 for Air Monitoring. These require an annual certification of SLAMS/NAMS data for the calendar year 2013. To satisfy this year's submittal, my staff has reviewed Ventura County APCD's (VCAPCD) 2013 calendar year data in AQS. The parameters, POC's and selection protocols listed in the attached reports are being certified.

The ambient concentration data and the quality assurance data are completely submitted to AQS and the ambient data are accurate to the best of my knowledge taking into consideration the quality assurance findings. Attachment 1 is the AQS Data Certification Report (AMP600) for VCAPCD. Attachment 2 is the AQS Quick Look Report (AMP450NC) for VCAPCD's PAMS program and remaining non-criteria pollutants.

As a regional PM2.5 filter lab, we also reviewed the PM2.5 FRM data for the monitors in our client network for part of calendar year 2013. The ambient concentration data are completely submitted to AQS. Attachment 1 (AMP600) also includes our clients samplers whose filters are analyzed by our filter lab.



If you have any questions, please contact Phil Moyal, 805-662-6953 or [phil@vcapcd.org](mailto:phil@vcapcd.org), or Elaine Searcy, 805-645-1431 or [elaine@vcapcd.org](mailto:elaine@vcapcd.org) of the VCAPCD's Monitoring Division.

Sincerely,



Michael Villegas  
Air Pollution Control Officer

Attachments

C: Gwen Yoshimura at [Yoshimura.Gwen@epa.gov](mailto:Yoshimura.Gwen@epa.gov)  
Meredith Kurpius at [Kurpius.Meredith@epa.gov](mailto:Kurpius.Meredith@epa.gov)  
Dena Vallano at [Vallano.Dena@epa.gov](mailto:Vallano.Dena@epa.gov)  
Karen Magliano at [kmaglian@arb.ca.gov](mailto:kmaglian@arb.ca.gov)